PRACTICAL PHYSIOLOGY.

Lectures ON EXPERIMENTAL PHYSIOLOGY.

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LECTURE X.

CIRCULATION—(CONTINUED.)

Innervation of the Heart—Intracardiac Nerves.

GENTLEMEN,—From this frog, narcotised with opium, I remove the heart, and lay it upon a plate of glass in a little pool of serum to keep it from getting dry. The heart goes on pulsating rhythmically, just as it did before it was removed from the body. As we shall see, the cardiac movements may be influenced by the central nervous system; but this experiment shows that in the heart itself are to be found the conditions which are essential for its rhythmical motions. Do these conditions exist in every part of the heart? I divide the heart transversely through the middle of the ventricle. Observe that now the apex lies motionless, while the base goes on beating rhythmically as before. Why is the apex motionless? Have I destroyed the contractility of its muscular fibres? Not so; for you see that when I send a faradic shock through the apex it gives a contraction, and then lies motionless as before. This experiment shows that the conditions necessary for the rhythmical motion do not exist everywhere in the heart. They are in the basal but not in the apical portion of the frog's heart which lies divided before you. Ganglia are found in the septum between the auricles, and in the sulcus between the auricles and ventricle. They have not been found in the apex. Hence it is generally believed that Remak was right when he maintained that the intracardiac ganglia are essential for the heart's rhythmical motions.

FIG. 45.

A diagrammatic representation of some of the cardiac nerves.—c, Heart. M, Medulla oblongata. Two intracardiac nerve-cells are represented as forming, with their fibres (the three marked with arrows, and in the heart), a reflex mechanism. *e e m* being an afferent or excito-cardio-motor nerve, which is probably connected with the endocardium. *c' m*, An efferent or cardio-motor fibre, ending peripherically in a muscular fibre. s, Sympathetic. V, Inferior cardiac branch of vagus. The sympathetic is excito-cardio-motor, or accelerating in its action. The vagus is cardio-inhibitory in its action. Two cells are represented in the medulla with nerves joined to them. The arrows indicate the direction in which the nerve influences appear to pass. The nerves marked *e e m* are excito-cardio-motor; they accelerate the cardiac contractions. The fibres marked *c i* are cardio-inhibitory; they inhibit or retard the cardiac action. (See text.)

Regarding the nature of the nervous mechanism existing within the heart we know nothing definite. We are, no doubt, safe in supposing that the muscular fibres are presided over by motor nerves connected with cells of the intracardiac ganglia. Bernard showed long ago that cardiac action may be readily called forth by stimulating the lining membrane of the heart. This fact seems to show that there is a reflex nerve mechanism in the heart, and that afferent nerves connected with this terminate in the endocardium. I repeat that we do not know the exact nerve arrangements, but it will facilitate your study of the matter if I draw a diagram (lower half of Fig. 45) showing a reflex nerve mechanism, such as I have drawn in a previous lecture (Lecture VI., April 29th, 1871). I put two nerve-cells, with a centripetal, a centrifugal, and an intercentral nerve-fibre. I beg you particularly to remember that this diagram *is a mere scheme.*

There is, then, every reason for believing that there is an intracardiac reflex nerve mechanism. Does this mechanism come into operation in order to bring about every cardiac contraction? I cannot return a precise answer to such a question. I am inclined to believe with Von Bezold that within the motor nerve-cells nerve force is produced as long as pabulum is supplied to the cell, and that when this force reaches a certain degree of tension it excites the motor nerve-fibre, and thereby throws the muscular fibre into contraction. That seems to me the most feasible hypothesis accounting for the rhythmical motion of the heart; but, mind you, it is *only* a hypothesis.

Cardiac Branches of the Vagus.

Whatever be the cause of the rhythmical action, it is quite certain that it can be influenced by nerves connecting the heart with the central nervous system. These nerves are branches of the vagus and sympathetic. In the rabbit the vagus gives two branches to the heart, a superior and an inferior cardiac branch. The former (*s c*, Fig. 46) leaves the vagus with the superior laryngeal nerve (*s e*); commonly it has two roots, one connecting it with the superior laryngeal nerve, the other with the trunk of the vagus. This nerve (c and c', Fig. 47) courses down the neck close to the cervical sympathetic (it is the smaller of the two), joins one or two branches of the inferior cervical ganglion (Fig. 47), with which it proceeds to the heart. In dogs the nerve is bound up with the vagus and cervical sympathetic in one common trunk. In cats it forms, throughout the greater part of its extent, a single trunk with the cervical sympathetic. The terminations of the nerve inside the heart are unknown. The inferior cardiac branch of the vagus (*i c*, Fig. 46) leaves the vagus with, or rather below, the inferior laryngeal nerve in the rabbit,

FIG. 46.

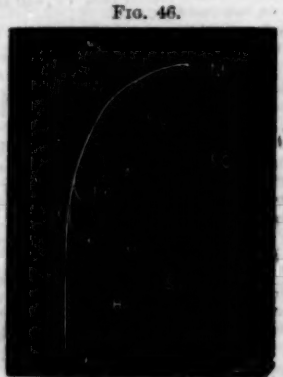
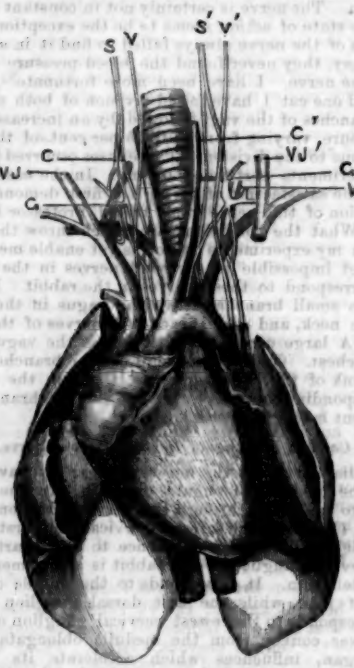


Diagram showing extracardiac nerves of the rabbit. M, Medulla. s c, Spinal cord. V, Vagus. s, Sympathetic. *s e*, Superior laryngeal nerve. *i c*, Inferior laryngeal nerve. *s c*, Superior cardiac, and *i c*, Inferior cardiac branch of vagus. The arrows indicate the direction of the nerve influences.

and from thence proceeds to the heart. It is believed to end in the cardiac ganglia, but a connexion between the nerve-cells and its fibres has not been satisfactorily shown.

FIG. 47.



Extracardiac nerves of rabbit. s and s', Sympathetic nerves with the superior cardiac branches of the vagus, c and c'. The sympathetic joins the inferior cervical ganglion, G and G'. The superior cardiac branch of the vagus joins a branch of the inferior cervical ganglion and with it proceeds to the heart. V, Vagus. VJ, Right external jugular vein. VJ', Left external jugular vein. Ve, Vertebral artery.

These two branches of the vagus have very important functions. That of the inferior cardiac branch was discovered in 1845 by the brothers Weber, while the function of the superior branch was discovered by Ludwig and Cyon in 1866. Both nerves are inhibitory; they diminish, or may indeed suspend, contractions of certain parts of the blood-vascular system. The inferior branch is a cardio-inhibitory, the superior branch is a vaso-inhibitory nerve. That is to say, the one inhibits the contractions of the heart, the other inhibits the contractions of bloodvessels.....[The vagus of a narcotised frog was divided in the middle of the neck, and the lower or cardiac end irritated, at first gently, and then severely. During the gentle stimulation the heart beat slower, and during the powerful stimulation it came to a standstill in a state of *relaxation*. During the arrest of the heart's action it was shown that direct stimulation of the heart produced contraction. It was further shown that, although the vagus irritation was continued, the heart began to beat again after a time.]

You have seen the effect of stimulating the lower end of the trunk of the vagus. The heart beats more slowly and may even for a time be brought to a standstill, not in a state of spasm, but in a state of *relaxation*. This is not due to a paralysis of the muscular fibres of the heart, for you have seen that when they are irritated they contract. It was formerly ascribed to spasm of bloodvessels in the heart cutting off the supply of pabulum to the nerves. But, as shown by Hyrtl, the frog's heart has no bloodvessels, therefore it is supposed that the nerve acts upon the cells of the cardiac ganglia which are concerned in the production of the cardiac motions, and this view is further supported by the fact that inhibitory nerves appear always to convey their influences *towards* parts which contain nerve-cells. Schmiedeberg and others suppose that the vagus does not directly end in the motor ganglia of the heart, but that there is between it and the motor ganglia an inhibitory apparatus which they are inclined to regard as ganglionic in its nature. Schmiedeberg has arrived at this conclusion from observing that if a frog be poisoned with nicotine irritation of the trunk of the vagus no longer retards the heart's action, but if the venous sinus be irritated, the cardiac action is inhibited just as if the trunk of an unpoisoned vagus had been stimulated. On the other hand, if a frog be poisoned with atropia it becomes impossible to retard the cardiac action by stimulating either the trunk of the vagus or the venous sinus. The atropia paralyses a part of the inhibitory mechanism which occupies a position peripheral to that paralysed by nicotine. Such experiments are extremely interesting and important. We are not, as yet, however, able to come to a conclusion regarding the way in which the vagus ends in the heart. The existence of a special intracardiac ganglionic inhibitory apparatus, distinct from the motor ganglia, has yet to be proved, and, therefore, I am not inclined to indicate the probable termination of the vagus within the heart by a diagram differing from that which I have used for several years. I therefore represent a cardio-inhibitory fibre of the vagus as ending in a motor ganglionic cell within the heart (see Fig. 45, v). Whether there be an intermediate apparatus or not, the cardio-inhibitory influence of the vagus seems to be conveyed to the motor ganglia. It appears to restrain the action of these. The amount of this restraint or inhibition bears a direct proportion to the extent to which the nerve is stimulated. When the stimulation is powerful the heart is completely arrested for a time; but the promptings to motion seem to become so powerful in the heart that contractions take place after a time, even although the vagus be stimulated as powerfully as before.

A powerful stimulation of the vagus is required in order to inhibit the cardiac action. This fact was brought out in a somewhat striking way by a method of experimentation adopted by me some years ago.* In rabbits and frogs I divided the vagus in the middle of the neck, and irritated the lower end by means of induction currents obtained from Du-Bois Reymond's machine. I began with very feeble currents, and found out the weakest currents which sufficed to irritate the inferior laryngeal fibres of the vagus so as to cause motion of the arytenoid cartilages. I then found out the weakest currents which sufficed to retard the cardiac action. From twelve experiments on rabbits I found that the laryngeal muscles were thrown into contraction by a current obtained from the machine when the secondary coil was at an average distance of 660 millimetres from the primary coil; while the heart's action was not inhibited until the secondary coil was pushed up to within an average distance of 225 millimetres from the primary coil. In four experiments on frogs I obtained similar results. The laryngeal muscles contracted when the average distance between the coils was 575 millimetres; while the heart was inhibited when the average distance was 190 millimetres. It is thus evident that a far more powerful irritation of the vagus is needed to retard the heart's action than is required to produce muscular action. The explanation which I would suggest in order to account for this difference is, that it is probably not owing to a difference in the excitability of the inferior cardiac and inferior laryngeal fibres of the vagus, but to a difference in the termination. An ordinary motor nerve may be supposed to encounter little opposition when it acts upon the muscular plasm compared with the opposition which an inhibitory nerve has to encounter, for its action is opposed by counter influences, and therefore it must be thrown into action sufficiently powerful to overcome these.

As I have mentioned, nicotine paralyses the cardio-inhibitory fibres of the vagus. This paralysis is preceded by irritation of these fibres. Atropia and curara produce paralysis without any previous irritation. Calabar bean increases the irritability of the cardio-inhibitory fibres, so that they are more readily thrown into action. As shown by Arnstein and Sustschinsky, the actions of Calabar bean and atropia are antagonistic. The effect of the one may be undone by that of the other. It is easy to convince oneself of this interesting and important fact. [The vagus of a rabbit was divided in the middle of the neck. Its lower end was irritated. The heart was thereby brought to a

* Influence of the Vagus upon the Vascular System. Trans. Roy. Soc. Edin., vol. xxvi.

standstill. Four milligrammes of sulphate of atropia, dissolved in four minims of water, were injected into the jugular vein. Within a minute thereafter the vagus was again stimulated; but no inhibition of the heart resulted. (The inferior cardiac branch of the vagus had been paralysed by the atropia.) Twenty milligrammes of the ordinary extract of Calabar bean, dissolved in eight minims of water, were injected into the vein. Within a minute thereafter the vagus was again irritated, and the heart was brought to a standstill — owing to the atropia paralysis having disappeared.] The remarkable experiment which you have just witnessed is one of extreme importance. It affords a typical example of the antagonistic action of two poisonous substances.

The cardio-inhibitory fibres of the vagus may be thrown into action by stimulating (1) the central end of the superior cardiac branch of the vagus, (2) the central end of the vagus of the other side, (3) sensory nerves in the case of warm-blooded animals, (4) the abdominal viscera in the frog, (5) the splanchnic and cervical sympathetic. In these instances the action of the cardio-inhibitory nerves appears to be induced reflexly. (6) Increased blood-pressure stimulates the cardio-inhibitory fibres. In the rabbit the heart may be inhibited to a remarkable extent by stopping the respiration. The heart comes nearly to a standstill usually within three seconds after the cessation of the respiration. This is due to irritation of the cardio-inhibitory nerves. A similar phenomenon is not observed in man, in the dog, or cat. The cardio-inhibitory fibres of the vagus appear in the case of warm-blooded animals to be usually in a state of action. It is commonly said that they are constantly in action, but I do not think that this is true. They are usually, but not always, in action. When they are in action, section of the vagi in the neck and paralysis of the cardio-inhibitory fibres are followed by an increase in the rate of the heart's motion. The results of section are not altogether to be trusted in the determination of such a point, for I have repeatedly found that section of the vagi in rabbits and dogs is followed by accelerated cardiac action, even when the cardio-inhibitory nerves had been previously paralysed by atropia. The probable cause of the acceleration in this case will be alluded to when we study the blood-pressure. Atropia paralyses the cardio-inhibitory nerves. If it be given after division of the vagi in rabbits and dogs, acceleration of the heart very rarely ensues; but if given before division of the vagi, acceleration generally ensues. This I regard as the best proof that the vagi are generally in action. In the case of the cat and rabbit the amount of action appears to be less than in the dog and man. Bernstein maintains that this action is not due to an influence starting from the roots of the vagus, but that it is induced reflexly. He finds that section of the vagi is not followed by cardiac acceleration if the nerves which can reflexly excite the cardio-inhibitory nerves (see above) have been previously divided. A further investigation is, I think, necessary ere we come to a conclusion on this point. Donders maintains that the action of the cardio-inhibitory fibres increases during inspiration, and diminishes during expiration.

The superior cardiac branch of the vagus (*sc*, Fig. 46; c, Fig. 47) conveys influences from the heart to the medulla oblongata. It seems to be the sensory nerve of the heart; for when it is divided, and its upper end stimulated, signs of pain are produced. It is also an excito-cardio-inhibitory nerve—that is to say, it conveys influences to the medulla, which excite the cardio-inhibitory fibres of the vagus. But the most remarkable result which follows stimulation of the central end of this nerve is a fall in the arterial blood-pressure. This is to a slight extent due to inhibition of the heart's action; but it is chiefly owing to dilatation of bloodvessels, those which appear to be most influenced being chiefly those of the abdominal viscera. The inferior cardiac branch of the vagus inhibits the heart. It brings the heart to *rest*; it dilates the heart by rendering the organ passive. The superior cardiac branch of the vagus inhibits *bloodvessels*. It brings them into a state of dilatation—that is, a state of rest. The former is cardio-inhibitory; the latter vaso-inhibitory. The former conveys its influence to the cardio-motor ganglia; the latter conveys its influence to the vaso-motor ganglia in the medulla oblongata. In consequence of the remarkable lowering of the blood-pressure effected by the superior cardiac nerves, its discoverers have named it "nervus depressor." Ludwig and Cyon suppose that this nerve is thrown into action when the heart encounters too much opposition to its action. The nerve lowers the arterial blood-pressure, and thereby diminishes the resistance offered to the heart's contraction. The nerve is certainly not in constant action; indeed, the state of action seems to be the exception. The discoverers of the nerve always failed to find it in action—that is to say, they never found the blood-pressure rise on dividing the nerve. I have been more fortunate. In two rabbits and one cat I have found division of both superior cardiac branches of the vagi followed by an increase in the blood-pressure, varying from 15 to 25 per cent. of the pressure previous to the division. These cases occurred in some thirty experiments performed by me. In the case of the cat I had the satisfaction of giving the first demonstration of the action of this nerve to my friend Professor Ludwig himself. What the conditions are which throw the nerve into action my experiments do not as yet enable me to say. It is as yet impossible to say what nerves in the human subject correspond to these nerves in the rabbit. In man one or two small branches leave the vagus in the upper part of the neck, and join the cardiac nerves of the sympathetic. A large cardiac branch leaves the vagus as it enters the chest. One or two small cardiac branches come off the trunk of the right vagus as it lies in the thorax. The corresponding nerves of the left side are branches of the recurrent laryngeal nerve.

The Cardiac Branches of the Sympathetic Nerve.

The cardiac sympathetic nerves appear to have their origin in the medulla oblongata, or brain. In the rabbit they pass to the heart through the cervical portion of the spinal cord (Fig. 46), the inferior cervical and first dorsal sympathetic ganglia, and from thence to the heart. The inferior cervical ganglion of the rabbit is sometimes called ganglion stellatum. It corresponds to the middle cervical ganglion of man, while the first dorsal ganglion of the rabbit corresponds to the lowest cervical ganglion of man. These nerves convey, from the medulla oblongata to the cardiac organ, influences which accelerate its action. Von Bezold thought he had proved this by showing that on irritating the lower end of the cervical spinal cord after its division the heart's action is accelerated. Ludwig and Thiry pointed out, however, that such evidence is fallacious. The cervical spinal cord contains nearly all the vaso-motor nerves of the body, proceeding from the vaso-motor centre in the medulla to various parts of the body. These are stimulated when the lower end of the divided cervical spinal cord is irritated, and, as a result of this, the blood-pressure is greatly increased. They pointed out, and Von Bezold afterwards confirmed the observation, that if the vagi be previously divided, increase in the blood-pressure, which is not excessive, accelerates the heart whether the cardio-motor nerves connecting the heart with the spinal cord be intact or not. If the root of the inferior cervical ganglion connecting the ganglion with the spinal cord be stimulated, the heart's action is accelerated without any noteworthy alteration in the blood-pressure being produced. This root is found alongside the vertebral artery. It is sometimes named "Nervus accelerans."

The nerves, then, which pass from the medulla oblongata through the cervical portion of the spinal cord and the last cervical and first dorsal ganglia of the rabbit to the heart excite the heart's action. We may term them excito-cardio-motor. They antagonise the influence of the cardio-inhibitory nerves. Their termination in the heart, though believed to be in the ganglia, has not been satisfactorily made out. In the diagram (Fig. 45) I have joined them to the cells of ganglia, for it is only by so doing that we can comprehend the action of the nerves. These sympathetic fibres are not in constant action, for division of the cardiac branches of the two ganglia which I have mentioned is rarely followed by a slackened rate of cardiac action. The influences which throw them into action have not been fully ascertained. (1) Emotion probably excites the heart through their agency. (2) According to Ludwig, muscular action stimulates the heart reflexly through them. (3) Diminished arterial blood-pressure, within the capillaries of the brain and medulla oblongata more especially, is believed by Ludwig to stimulate them. Bezold believed that the cervical sympathetic nerve contains fibres which accelerate

the heart's action, he having found that if in rabbits this nerve be divided, and its lower end be stimulated, the heart's action is accelerated. I have performed many experiments on this point, and have observed this acceleration in only one instance. It was in a rabbit to which one centigramme of atropia sulphate had been given. In several other cases in which a similar dose was administered no acceleration followed excitation of the nerve. Ludwig had previously arrived at the conclusion that the cervical sympathetic is not an excito-cardio-motor nerve.

In man there are three cardiac nerves connected with the sympathetic on either side. These nerves pass between the cervical sympathetic ganglia and the heart. Each cervical ganglion sends a branch. These nerves have probably an excito-cardio-motor function, but this has not been ascertained. I have mentioned that the middle and inferior cervical ganglia of man correspond to the inferior cervical and first dorsal ganglia of the rabbit.

We have seen, then, that the heart's action is influenced by two nerves connecting it with the medulla oblongata and cervical spinal cord. The inferior cardiac branch of the vagus inhibits, the sympathetic branches accelerate, the heart's action. There is here, therefore, a complex mechanism which doubtless plays a very important *rôle* in cardiac action. What is the precise nature of the influences which bring them into play is still open to conjecture. I have several times spoken of the effect of the blood-pressure on the cardiac action. That the pressure of the blood upon the lining membrane of the heart can influence the heart's motions there can be no doubt. As shown by Ludwig and von Bezold, when the vagi and sympathetic nerves of the heart are divided increased pressure within the heart accelerates cardiac action. This appears to result reflexly by stimulation of the peripheral ends of the intracardiac afferent nerves concerned in the cardiac motions. On the other hand, diminution of the pressure is followed by diminished speed of the heart. But if the cardio-inhibitory fibres of the vagi be intact, increased blood-pressure is followed by diminished cardiac action. This seems to be due to stimulation of the cardio-inhibitory nerves; while if the blood-pressure be lowered Ludwig finds that acceleration of the heart ensues. This he ascribes to irritation of the excito-cardio-motor nerves of the medulla. The influence of alterations in the blood-pressure which are observed when the extracardiac nerves are intact is supposed to proceed from small arteries or capillaries of the brain and medulla, and perhaps other parts. I think that all this requires further investigation ere we come to definite conclusions.

ANALYSIS OF 11,000 CONSECUTIVE CASES OF SKIN DISEASE.

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(*Continued from page* 809.)

THE second class of diseases not defined by uniform causes, the New Formations, includes as many forms of disease as the Inflammations; but the number of cases was much less, being 251, of which 218 occurred amongst the 10,000 hospital, and 33 amongst the 1000 private patients.

Under the head of varix 45 cases were registered. But this does not at all represent the actual number, for those complicated with ulceration, erythema, eczema, and syphilis were classed under these heads.

Of verruca, or warts, there were 33 examples, which included several cases in which numerous warts had developed themselves in different parts of the head only, or less frequently in combination with warts on the hands and other parts. Isolated warts were treated locally by means of caustics, excisions, &c.; but, where numerous, constitutional treatment was more relied upon, such as attention to the general health, tonics, and, above all, arsenic, which in some cases caused their complete disappearance. This leads me to remark that it is a mistake to suppose that warts are mere local affections; indeed, I have little doubt that they are remotely connected with the scrofulous diathesis—that they are what we may call, in imitation of our friends across the Channel, a benign scrofulide, as they are specially apt to occur in persons of a scrofulous habit, and as strumous affections very often take on the warty character. This is well illustrated by that form of strumous disease which I have named Scrofuloderma verrucosa, and to which allusion has already been made.

Only two cases of scleroderma came under observation, one of which was a hospital case, and the other a private patient. The following are the main features of the latter. Janet A——, shopkeeper, came for advice on Jan. 1st, 1867. Her general health was not quite up to the mark; her tongue was very white and chapped, and the papillæ prominent. Her appetite was extremely capricious, her bowels very costive, and she slept badly. The disease set in about the beginning of February, and was attributed to her having caught cold during the frosty weather. It implicated both arms, the right much more than the left, but did not extend beyond the shoulders. The skin, in irregular patches, was deeply pigmented, especially on the back of the hand and along the outside of the forearm. The whole arm looked a little thicker than natural, and the skin was tense and glossy. Its natural softness, too, had given place to a firm doughy feel, but without any trace of œdema. The forearm was much more affected than the upper arm, but the hypertrophy was by no means limited to the brown parts. Owing to the rigidity, the hand could only be partially closed. The patient complained of neither pain nor uneasiness of any kind. Notwithstanding the use of tonic-aperients and of tonics, the disease had made some progress when she was again seen on Aug. 22nd, and there was a tendency at some parts to eczematous complication. On Oct. 12th, however, having just returned from a visit of a month's duration at Arran, she came to me looking much healthier, and feeling "a great deal better in herself." The tendency to eczematous complication had disappeared. The arms, especially the upper arms, were softer, the pigmentation paler, and she could close her right hand a little better than previously. Since that time I have not heard anything of her.

Eight cases of elephantiasis Arabum came under observation, only one of which occurred amongst the private patients. The most typical of these was a poor girl who came for advice on June 22nd, 1866, and whose symptoms were in great measure removed by the tying of the external iliac artery by my colleague, Dr. George Buchanan. As, however, this case was very fully described and illustrated in the *Journal of Cutaneous Medicine*, vol. i., p. 180, it is unnecessary to dwell upon it; but it is only right to add that about a year after the operation the disease was reported to be again in the ascendant.

Only two cases of elephantiasis Græcorum (true leprosy) were noted, one of which occurred amongst the hospital, and one amongst the private patients. Indeed, only one other case has occurred in my own practice, showing the extreme rarity of the affection in Scotland. The hospital patient was a young Highlander who had never been out of the country. One of the private patients was a boy aged twelve, who returned from India four years ago, a year after which the symptoms in a mild form began to show themselves. He exhibited brownish-red, circumscribed, erythematous patches of varying shape and size, and a few tubercles, especially on the face, arms, and legs, and accompanied by considerable swelling of the hands. He was thin and did not look very strong. The other private patient was a young lady aged fifteen, sent to me by Dr. Moir, of Edinburgh. She came home from Jamaica at the age of seven, some time after which the disease commenced on the face. The eruption consisted for the most part of yellowish-red, erythematous patches, healing in the centre and spreading at the edges, so that elevated rings and segments of circles were left, some of them of very small size, others having an area nearly equal to that of the palm. Here and there the elevation of the eruption was decided, and tubercular in character. The sensation was much deadened, especially where the eruption was most elevated. The parts which had previously been affected were not cicatricial, but sensation had not returned to them. She complained of partial loss of power in the upper extremities, and a large round excavated ulcer was observed on the sole of one foot, which

had been preceded by the development of a bulla. This ulcer was situated in the middle of a large erythematous patch upon the sole. Her general health appeared to be good. A course of tonic treatment was, however, recommended. It was also advised that the patches should be dressed with pieces of lint spread with mercury plaster. I have had no report of her since.

Only one illustration of primary cancer of the skin came under my observation. This was the case of a lady aged about sixty, who was sent to me on July 15th, 1867, by Dr. Francis Henderson, of Helensburgh. She had never been strong, but had had no serious illness. She was of a very spare habit of body, and looked rather weaker, but younger than her age. She complained occasionally of feeling bilious, and her bowels were rather loose and very easily and powerfully affected by aperients. The skin affection, which was of eight months' duration, commenced over the left breast, and gradually extended over the greater portion of the front of the chest and upper part of the abdomen. There were very slight indications of disease on the back and arms, while the face, neck, lower extremities, and lower portion of the trunk were unaffected. The skin affection presented three elements—(1) a rosy erythema, which appeared to be the first stage; (2) purple streaks, the colour of which was not altered by pressure, which were evidently dilated and obliterated cutaneous vessels, and which seemed to be the third stage; and (3) little firm nodules varying in size from pin-heads to split peas, some of them elevated, most of them not, and which were adherent to the cuticle, which was of the natural colour, except over a few of them where it was rosy. The patient complained of slight itching, and for about three weeks previous to my seeing her she had experienced once or twice a day "a pain shooting up from the right breast." On the 2nd of March, 1868, Dr. Henderson wrote to me as follows:—"The lady I sent to you in July or August with tuberculous cancer of the skin is still alive. The disease has spread over most of the skin of the chest and abdomen, and there are hard tuberculous nodules on the skin of the arms. She suffers no pain, but is now fast sinking."

Only one case of multiple fatty tumours is noted in the present statistics—that of a gentleman, aged about fifty, who resided in the Highlands, whose general health appeared to be good, except that he was the subject of psoriasis, and frequently noticed that his urine was muddy. He had accidentally noticed the tumours a short time previous to my seeing him. They were scattered over the body, especially the extremities; they were seated in the subcutaneous cellular tissue, varying in size from a large bean to a small walnut; and were soft, nodulated, and painless. They were non-adherent; and the skin over them was of the natural colour. No cause could be assigned for their appearance. A very similar case, not included in the present statistics, was recently admitted into the medical wards of the infirmary, under my care; but in this case the tumours, which presented all the characters above indicated, were associated with the diffuse development of fatty matter in the subcutaneous cellular tissue in the right hypochondriac and epigastric regions, to such an extent that he was obliged to bring the opposite sides of his waistcoat and trousers together with the aid of pieces of string.

(To be concluded.)

CONTRIBUTIONS ON THE PHYSIOLOGY & THERAPEUTICS OF FOOD.

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No. II.

THE SOURCE OF FOOD.

THE vegetable kingdom forms the primary source of our food. Dumas even at one time affirmed—"L'animal s'assimile, donc, ou détruit des matières organiques toutes faites; il n'en crée donc pas." This, however, as he afterwards admitted, does not strictly hold good. The animal no doubt is incessantly consuming or destroying organic substances, and is incapable of forming them from the inorganic principles; but, if supplied with organic matter, organic compounds of various kinds are constructed.

Mulder's discoveries in 1838 led up to the doctrine that the albuminous compounds of plants and animals agree in composition and properties; whence it was inferred that the animal simply took the compound of the plant and made it a component part of its own body. Liebig, however, was the first to maintain that animals possessed the power of forming one kind of organic compound out of another. Upon this there arose a controversy, with particular reference to fat. In opposition to Liebig's teaching, that in the animal system fat was producible from sugar, Dumas and Boussingault held that whatever fat was found in an animal being came through its food from without. It is now, however, matter of history that the French authorities have had to abandon their doctrine in favour of the German.

One kind of albuminous compound, it is almost needless to say, can be constructed from others. In the young mammal, subsisting on milk, the caseine is the source of fibrin and albumen; in the animal feeder, when excreting milk, the casein comes from the fibrin and albumen of the food. Gelatin is not found in vegetable food. None of these nitrogenous principles (it is now established) enter the system in the form in which they occur as food. During the digestive process they are all converted into albuminose, which is the principle absorbed and subsequently transformed by the animal's assimilative powers into the various principles met with.

The capacity really existing in animals is that of transforming one organic compound into another. All organic matter has its origin in the vegetable kingdom, from which, therefore, all our food is directly or indirectly derived. The vegetable feeder goes at once for its food to the vegetable kingdom. The animal feeder is not less dependent on the products of the vegetable kingdom for its pabulum. But this it obtains, so to speak, in a second-hand way only; its food consisting of the flesh of animals which have themselves been nourished on vegetable products.

Plants grow under the action of the sun's rays, to the influence of which we must refer the production of food in the first instance, and the source of all terrestrial life. I have already shown how the energy emitted from the sun, as heat and light, is able, through the medium of the plant, to disengage oxygen from its combination with carbon and hydrogen in carbonic acid and water and lead to the formation of re-oxidisable compounds; and how the energy evolved from the re-oxidation of these compounds, whether by combustion or within the animal system, represents the equivalent of that employed in effecting their construction.

We cannot help being struck by the immensity of the amount of power that must have been emitted from, and is still stored up in, the sun, when we come to consider that from the small pencil of rays which has impinged upon our earth at a distance of nearly 95,000,000 miles has been derived all that energy, or source of power, which, under the view now held by philosophers, has been fixed by past and present vegetation, and much besides that has escaped being so utilised.

Geology, indeed, teaches us that early in the history of the globe solar influence must have manifested itself in a much stronger degree than it does even at present. The vast coal-beds in the earth's crust are vegetable in their origin, and carry us back to a time when, under solar influence operating on an atmosphere surcharged with carbonic acid and humidity, the most luxuriant vegetation existed, and even so in the arctic regions, as coal-deposits are there to be found.

Now, the force of the sun's rays co-operating with the action of the plant leads to the building up of organic compounds, and it is in the green parts of the plant—those containing chlorophyll—that the decomposition of carbonic acid and water occurs, accompanied with the fixation of carbon and hydrogen and the liberation of oxygen. This is the plant's distinctive function, which ceases to be performed when light is absent, or when no chlorophyll exists. Under these latter conditions—absence of light and chlorophyll—oxygen is absorbed, and carbonic acid set free, as in the animal being. I have been informed that it is a fact known to florists that, in the case of the variegated-leaved geranium, a slip that happens to possess white leaves only,

will not grow, like other slips, alone. The absence of chlorophyll explains the non-capacity to effect the changes necessary for independent growth.

The solar beam consists of rays having different properties and degrees of refrangibility; and the question has been raised, what part of the solar spectrum exerts most power over vegetable growth. The order in which the coloured rays, producible by passing a beam of light through a prism, are arranged, is as follows: violet, indigo, blue, green, yellow, orange, red. The brightest yellow rays contain the highest illuminating power of the spectrum. The greatest heating power is in rays below the red, and therefore of less refrangibility than any of the coloured rays; whilst the violet, and still more the invisible rays just above, contain the highest chemical power.

In 1843, Draper satisfied himself, by causing plants to effect the decomposition of carbonic acid in the prismatic spectrum, that the yellow rays were by far the most effective; and the relative power of the different coloured rays was said by him to stand as follows: yellow, green, orange, red, blue, indigo, violet. Others maintain, on the contrary, that it is to the blue and violet rays that must be referred the maximum power of effecting the decomposition of carbonic acid through the medium of the plant. Helmholtz, for example, says:* "The observations upon vegetable life have shown that plants can only grow under the influence of solar light, and that as long as solar light, and principally the more refrangible parts of solar light, the blue and violet rays, fall upon the green parts of plants, the plants take in carbonic acid and exhale oxygen." In exerting this influence these rays are completely absorbed—solar light which has passed through fully developed green leaves being no longer capable of exerting any chemical influence.

I have spoken of light as a factor in the construction of organic compounds by the plant. The elements of which these organic compounds consist are drawn from the inorganic kingdom, and chiefly, as Liebig pointed out, from carbonic acid, water, and ammonia—principles which exist to a greater or less extent in the atmosphere, and from the atmosphere are always to a large extent, and sometimes entirely, obtained by the plant.

The stages passed through in the history of vegetable life towards the provision of fitting food for animal existence may be thus represented. Beginning, say, with a barren surface freshly exposed to the atmosphere from some volcanic or other agency, the germs of low vegetable organisms settle upon it, and abstract from the atmosphere their appropriate elements of growth. Passing through their term of life, they die, and fresh ones subsequently spring up, similarly to live and die. So the process goes on, higher and higher forms making their appearance. The decaying remains of this primitive growth encrust what was a barren surface with mould, in which ultimately the highest plants find a suitable situation for taking root and growing. Thus clothed with vegetation, a fit locality is found for the support of animal life, animal beings finding in the vegetable products they meet with the necessary material for their subsistence.

Such is the general position occupied by the vegetable kingdom in relation to the production of food for animal beings; but there is one tribe of plants, it may be remarked—viz., the fungi,—which seems to stand in an exceptional situation, and to resemble in phenomena of life animal rather than vegetable organisms. This group of organisms, for instance, is not dependent in the same manner as other vegetable growths upon the influence of light; has no green surfaces for decomposing carbonic acid; seems, like animals, to subsist upon organic matter; and further, like them, abstracts oxygen and sets free carbonic acid. The appropriation of organic matter may, however, be more apparent than real, for the growths in question live only where decay is going on; and if it is not actually the inorganic products of decay that are applied, there is nothing to show that any other than organic compounds in a state of decomposition can be made use of.

* Lectures on the Conservation of Energy, Med. Times and Gaz., vol. i., 1864, p. 473.

SCARLATINA is at present very prevalent in the county Down, and numerous deaths have resulted from an extremely bad form of this malady.

REMARKS ON STONE IN THE BLADDER.*

BY W. F. TEEVAN, B.A., F.R.C.S.,

SURGEON TO THE WEST LONDON HOSPITAL, SURGEON TO ST. PETER'S HOSPITAL, LATE LECTURER ON ANATOMY AT THE WESTMINSTER HOSPITAL.

I PROPOSE, firstly, to make a few remarks on the choice of an operation; secondly, to glance at lithotrity; and, lastly, to discuss lithotomy.

The choice of the kind of operation that may be desirable in certain cases is still to some extent an open question; for it must be remembered that, although the lithotrite may successfully remove the stone, it yet not rarely fails to cure the patient, or to ensure him against the return of his malady; so that there is a wide difference between the removal of a calculus and the perfect freedom of the patient from any further annoyance or recurrence.

The question of lithotrity *versus* lithotomy in males under sixteen years of age may be considered as settled in favour of the latter operation, for cutting for stone in boys is so very successful an operation that no apparent advantage can be gained by substituting, in them, lithotrity for lithotomy; but the physical development of a patient, rather than his age, ought to determine the question as to which is the earliest period that lithotrity may be admissible in youth. And it must also be borne in mind that the narrow urethra of a boy may preclude the introduction of a lithotrite. The youngest patient in whom I have performed lithotrity was sixteen years of age; but he was large for his age, and his well-developed penis enclosed a capacious urethra.

If possible, lithotrity ought always to be performed in adults in preference to lithotomy; but, inasmuch as lithotrity is in reality only applicable to selected cases, it will be seen that in hospital practice a large number of sufferers must always be left for the knife as the only means of cure. As a general rule, it may be said that it is not advisable to crush a stone which is larger than a walnut. In men who are young and strong a large phosphatic stone may be crushed with safety; but it is not desirable even to crush a moderately-sized calculus in an infirm old man whose health is much broken, or who may be the subject of chronic cystitis, for the increased irritation set up by the operation of lithotrity in a much-diseased bladder is likely to prove perilous to life. The state of the bladder in the subject of a contemplated operation has not, I think, received that attention, sometimes, which it deserves. If the viscus be in an irritable state, or be unable to expel its contents without the use of a catheter (not comfortably borne), we shall be exposing the patient to danger if we perform lithotrity; for he will suffer great annoyance either from his ever-recurring desire to micturate or our washing out his bladder, so that his health will probably break down under the prolonged irritation and confinement. If there are several calculi, it is usually better to cut than to crush; and an oxalate-of-lime stone, unless smaller than a walnut, had better be cut out rather than crushed.

Then, again, there are certain cases—not many, though—in which no instrument shaped like a lithotrite can be introduced into the bladder, and which must be cut on a very long and curved staff. Thus, therefore, it appears that lithotrity takes out the good cases for itself and leaves the bad ones for lithotomy: the former operation is only applicable in selected cases; the latter embraces all. We may thus at the very outset premise that lithotrity can be performed oftener in private practice than in hospital; for, in the former, patients usually seek advice on the advent of the first symptoms of stone; whilst, in the latter, they very often delay applying to a hospital for relief till forced to do so by the urgency of their sufferings caused by the presence of a calculus of long standing.

Messrs. Mayer and Meltzer have constructed for me, after my own design, a lithotrite which I believe has certain advantages not possessed by any other. It must be a matter of daily observation to every surgeon that a sound or metal bougie glides into the bladder more easily than a hollow metallic catheter; and we shall also find that the heavier the lithotrite the more facile will be its introduction. I

* Read before the Medical Society of London, Dec. 1870.

consequently have had my lithotrite made with a heavy square steel handle, which form not only permits the greatest facility of introduction, but also unites firmness of grasp when held, with extreme delicacy of manipulation. Then, again, I have substituted a vertical slide for a button, which only requires the pressure of the thumb—infinitely more simple than thrusting a button to and fro.

The great secret of success in passing a lithotrite comfortably to the patient, and without any hitch to the manipulator, is simply to keep the handle close to the patient's belly, and to delay the turning movement until it is called for by the fact of the lithotrite not going any further, thus announcing that it has arrived at the turning point. The instrument ought to be oiled from end to end, and the penis pulled well forward on to the lithotrite until the beak has passed the subpubic arch. If the patient's prostate be enlarged, a good stiff bolster under the buttocks will make all the difference between success and failure. No instrument glides into the bladder so easily as a lithotrite; it simply requires, not pushing, but directing—its own weight does away with the necessity of the former action. Any attempt to force a lithotrite into a bladder will be attended with disastrous consequences, especially if the prostate be enlarged. As a rule, the only difficulty in getting hold of a stone occurs when it is small and lying in a cul-de-sac behind a large prostate; and it may be said that the shorter the time the instrument remains in the bladder the more favourably is the case likely to turn out.

In performing lithotrity, one of two courses is open to us. We can either break up the stone in one or two crushings, or we can subject the patient each week to one very short and partial crushing. If the former procedure be adopted we shall, unless the stone be very small, set up great local and constitutional disturbance and irritation, depriving the patient of rest, and taking away his appetite; if, on the contrary, the latter method be adopted, we shall create but very little annoyance, and the patient will only be confined to his bed the day of his operation, and lose neither rest nor appetite; that method therefore must be the better which does not interfere with a patient's rest or appetite. By adhering to the plan of very short crushings I have lately treated several cases with perfect success as out-patients, and believe they made more rapid recoveries than they would if they had been confined to the hospital; it must, however, be borne in mind that the only exercise they were subjected to was a short occasional walk at a slow pace.

I object to chloroform being given in lithotrity, for I consider the patient's consciousness a most useful adjuvant to the surgeon in this operation, and I should not allow it to be administered in any case of my own unless some grave reason demanded its administration. I am afraid the act of "washing out the bladder" is looked upon very lightly, but it is infinitely more annoying to the patient than lithotrity, and ought never to be employed unless imperatively needed, for much irritation may be set up by it.

(To be concluded.)

ON CHROMIC ACID AS AN ANTISEPTIC, DISINFECTANT, ETC.,

MORE ESPECIALLY AS COMPARED WITH CARBOLIC ACID.

BY JOHN DOUGALL, M.D. GLAS.

CHROMIC ACID occurs in brilliant crimson needles, which deliquesce by exposure to the air. When pure it is almost odourless. Its aqueous solution has a sour metallic taste, and a rich amber or reddish-brown colour. It is very soluble in water, sparingly soluble in chloroform, insoluble in the fixed oils and fats. Contact with carbolic acid, mucilage, glycerine, alcohol, ether, and with organic matter generally, instantly decomposes it with more or less violence, oxygen being evolved and heat generated.

Antiseptic properties.—As an antiseptic, disinfectant, and preventive of germ growth, chromic acid stands "second to none." Several varied experiments were made in order to ascertain its antiseptic powers in contrast with those of carbolic acid. One detailed may suffice, all the others confirming it. One ounce of ox muscle was immersed for twenty-four hours in four ounces of an aqueous solution of chromic acid (1-2000), then suspended in air. In two days it was quite black, and in six days as hard as wood, in which condition it still remains (three months after), without mould or taint. One ounce of ox muscle was immersed for twenty-four hours in four ounces of an aqueous solution of carbolic acid (1-1000), then suspended in air. In six days it was much hardened, brownish-black, speckled with mould, and distinctly tainted.

It appears that chromic acid acts as an antiseptic by coagulating protean compounds, a property which it possesses in the highest degree, and to which I am not aware that attention has been hitherto directed, although used for a considerable time in hardening animal tissues for microscopical examination. The coagulating power of chromic acid in albuminous solutions has been compared with that of most metallic salts, various acids, &c., and found to exceed them all: e. g., it has about ten times the coagulating power of carbolic acid, fifteen times that of nitric acid, twenty times that of bichloride of mercury, and a hundred and fifty times that of chloralum, &c. Shortly after a piece of muscle is immersed in a solution of chromic acid there forms in considerable quantity a greyish, opaque, granular sediment, coagulated albumen; while the deep-red of the muscle is changed to brownish yellow, ultimately it looks as if it had been boiled, the residual portion of muscle being composed almost exclusively of fibrous stroma, which, on drying, becomes extremely hard and tough. A portion of muscle immersed in a solution of carbolic acid retains a light-pinkish, somewhat blanched aspect; while the solution remaining, void of sediment, is reddish and hazy, but translucent. If to a portion of this fluid there be added a little chromic acid solution, not stronger than 1-1000, a voluminous precipitate of albumen is at once obtained, clearly demonstrating the superior coagulating power of chromic acid over that of carbolic acid.

A solution of two grains per ounce at once indicates the presence of albumen in a solution consisting of one part of a saturated solution of beef juice in twenty of water; while one of beef juice in thirty of water may be detected by allowing the mixture to stand for twelve hours. Chromic acid is admirably adapted for determining volumetrically the percentage of albumen in a fluid. An albumenometer may be constructed as follows: Fill a wide-mouthed burette to a multiple of 100 with albuminous urine or an albuminous fluid; add solution of chromic acid, about four grains per ounce, in slight excess; shake the mixture; set aside for twenty-four hours; read off the precipitate, and multiply to per cent. No heating is required. Chromic acid also coagulates mucus, saliva, chondrin, and gelatin. With the latter two it forms, in excess, canary-yellow fluids and flocculent precipitates coloured like chromate of lead. The reaction with gelatine is as delicate as that with tannin, giving a response with 1 to 5000. Chromic acid is therefore a test for gelatine. An aqueous solution of carbolic acid (1 to 20) produces only slight haziness in gelatinous solutions.

Disinfecting properties.—Chromic acid coagulates, hardens, and oxidises decomposing organic matter. It combines simultaneously with ammoniacal products and with nascent sulphuretted hydrogen, reducing the latter to water and free sulphur ($2\,CrO_3 \times 3\,H_2S = Cr_2O_3 \times 3\,H_2O + 3S$). Added to putrid blood, flesh, pus, urine, or fæcal matter, the offensive odour is soon absolutely removed, the mixture remaining fresh for an indefinite time. Dr. R. A. Smith found that bichromate of potassium surpassed thirteen other of the most energetic antiseptics, including carbolic acid, in preventing the evolution of sulphuretted hydrogen in a mixture of equal parts of blood and water.* This salt has a coagulating power near that of nitric acid—i. e., fifteen times weaker than that of chromic acid. Hoppe Seyler has shown that, "while in disinfection it is highly necessary to destroy the products of fermentation and putrefaction, yet the destruction of sulphuretted hydrogen and ammonia can have no more influence on the fermentative changes involved in cholera and typhus than the removal of carbonic acid can have upon the progress of alcoholic fermentation; and therefore the ferment itself must be attacked, which, as pointed out, is more resistent than the living organisms in decomposing solutions." † Now chromic acid, as already

* Disinfectants and Disinfection, pp. 89, 91.
† THE LANCET, Aug. 26th, 1871.

shown, fulfils admirably these requirements. Carbolic acid does not combine with ammonia, nor decompose sulphuretted hydrogen. This is surely of importance in a sanitary sense, when it is remembered that almost to these properties alone are due the marked disinfecting powers of sulphurous acid, nitrous acid, permanganate of potassium, bisulphite of lime, protosulphate of iron, chloride of zinc, chloride of aluminium, chlorine, bromine, iodine, &c. Carbolic acid seems to act as an antiseptic solely by coagulating albumen. It does not preserve by absorbing and retaining moisture, like chloride of sodium, alcohol, &c., as, practically, it has no affinity for water. Chromic acid is the reverse.

In Dr. A. E. Sansom's book, page 28,* the following passage occurs:—"It has been shown, however, that carbolic acid has the faculty of coagulating albumen. Is it on account of this faculty that it prevents fermentation and putrefaction? On this point a comparative experiment throws some light. Let a solution of the albumen of egg be precipitated, in one case by heat or by an ordinary chemical reagent, and in the other by a solution of carbolic acid, and let the resultant precipitate be kept a considerable time in contact with the air. It will be observed that whereas in the one case the albumen will become decomposed in the ordinary manner, that precipitated by the carbolic acid entirely resists putrefactive change. It is therefore obvious that carbolic acid has an action over and above its action as a mere precipitant of albumen." The fact is here ignored that in general chemical precipitates of albumen are soluble in water, specially carbolico-albuminoid precipitates; and as the latter cannot exist without the presence of carbolic acid, the difference between the "carbolic" and "heat" precipitates is simply that the one contains an antiseptic, while the other does not. As regards the other precipitates, the alleged results only show that carbolic acid is a more powerful antiseptic than any of the ordinary chemical reagents referred to. Furthermore, it may be urged that carbolic acid is volatile, whereas chromic acid is fixed; therefore the former can arrest putrefaction by coagulating floating particles of organic débris. But in a series of experiments by Dr. R. A. Smith,† "to determine the efficiency of strong gases and volatile substances in preventing putrefaction," it is shown that pieces of fresh meat suspended in bottles containing chlorine, bromine, iodine, hydrochloric acid, ammonia, protoxide of nitrogen, nitrous acid, and sulphurous acid, were fresh at the end of twenty-eight days; while a piece suspended in a bottle containing heavy oil of tar, and a piece in a bottle containing M'Dougall's powder, of which the chief ingredient is crude carbolic acid, grew slimy and putrid in seven days. I have also made the following experiment:—A piece of ox muscle, a portion of beef juice, of urine, and of infusion of hay, the three latter in separate phials, were suspended in a gallon bottle, which contained fully a pound of pure carbolic acid, about six inches from its surface. The bottle was kept open at about 60° Fahr. On the fourth day the beef juice was putrid and swarming with bacteria, vibriones, &c. A portion of the same juice exposed to the air was not more putrid on the fourth day than that in the bottle. On the fifth day both the urine and infusion of hay teemed with life; while on the surface of the latter there was an abundant development of penicillium. On the sixth day the piece of muscle was putrid and slimy. These facts prove that the vapour of carbolic acid, even when most concentrated, fails to arrest putrefaction, and to prevent the appearance of germs; indeed, as seen with the beef juice, it does not even delay those phenomena, the portion suspended in the carbolised atmosphere putrefying as quickly as that kept in ordinary air. "Here is a beautiful hypothesis slain by an ugly fact." After these results it is impossible to conceive, as it would be absurd to expect, the infinitely-minute quantity of carbolic vapour which can be tolerated in the wards of a hospital, or is capable of diffusing spontaneously in an alleged infected medium, competent to destroy floating unseen germs and organic particles, seeing that in the highest state of concentration, and all the conditions in its favour, it failed to affect visible germs and tangible organic particles.‡

(To be concluded.)

* The Antiseptic System. By A. E. Sansom, M.D. Lond.

† Disinfectants and Disinfection, p. 109.

‡ See, also, "On the Relative Powers of various Substances in the Destruction of Microscopic Organisms," in THE LANCET of Aug. 6th, 1870.

ON THE APPLICATION OF THE DIAPASON TO CLINICAL AUSCULTATION.

BY W. HANDSEL GRIFFITHS, PH.D., L.R.C.P. & S. ED.,
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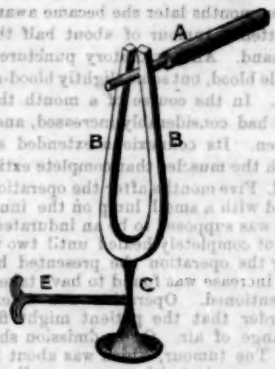
AN extensive study of the science of acoustics with reference to clinical auscultation leads me to suggest, as a valuable adjunct to physical diagnosis, a modified form of the ordinary diapason, or "tuning-fork."

It is a well-known fact that the intensity of sound evolved, or the degree of resonance elicited, by a vibrating diapason, varies with the nature of the substance or surface on which it rests. I have been lately engaged in an experimental inquiry with a view to define the value of this principle as applied to clinical auscultation, and have been much gratified by the result. The form of diapason which I have hitherto used is intelligibly figured in the annexed cut. B B are



the "prongs," which, on being suddenly separated by the "sounder," A, vibrate, and so evolve sound; C is the "connector" by which the sound is communicated to the small bell-like "dome" (similar in general size and shape to the small end of the stethoscope); and E is the handle by which the instrument is held in apposition with the surface of the organ or part under examination.

Now, although the variable resonance afforded by this instrument on application to different regions of the body is most remarkable, and beautifully indicative of abnormal condition or altered structure, I conceive that it is possible to invent a more delicate and definite indicator; but it would probably be in accordance with the same principle.

It is not in pulmonary affections only that such an instrument is likely to prove valuable; in almost every abnormal condition of almost every organ the indications afforded by it are likely to prove of inestimable service in forming a diagnosis.

Now I am not promulgating these suggestions as the result of mature or perfected research, but I have thought it expedient to publish them, crude as they are, in the hope that the attention of abler minds and more acute intellects may be attracted to the subject. The field of observation thus opened is, I believe, a wide one, and likely to repay a careful and protracted investigation. I trust that the co-operation of contemporary physicists and physicians will enable me, ere long, to offer to the profession a standard instrument, constructed on strict acoustic principles, which will afford definite and delicate indications of variable resonance, and which will be reliable as an index of altered structure and organisation.

I am not aware that the idea of applying the diapason, or any similar instrument, to clinical auscultation has hitherto been suggested; but if so, I trust that I may be corrected, and that the credit of priority will be claimed by the originator. At all events I am convinced that the subject, if not novel, is well worthy of revival.

In conclusion, I shall be grateful for any communications relative to the matter, and will faithfully record in future publications any suggestions or remarks of value.

17, Hume-street, Dublin, Nov. 1871.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI: *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

CASES UNDER THE CARE OF MR. SAVORY.

Operations for Recurrent Fibroid Tumour in the Thigh; tetanus; death.—The patient, Louisa R——, first experienced stiffness and pain at the upper part of the left thigh when between seventeen and eighteen years of age. About eighteen months later she became aware of the presence of a flattened tumour of about half the size of the palm of the hand. An exploratory puncture withdrew at first only a little blood, but some slightly blood-stained serous fluid followed. In the course of a month the dimensions of the tumour had considerably increased, and its removal was undertaken. Its connexions extended so widely and deeply beneath the muscles that complete extirpation could not be effected. Five months after the operation the patient was discharged with a small lump on the inner side of the wound, which was supposed to be an indurated gland. The wound had not completely healed until two months later. One year after the operation she presented herself again, and a marked increase was found to have taken place in the lump just mentioned. Operation was deferred for two months, in order that the patient might first seek the benefit of change of air. On readmission she was twenty years of age. The tumour, which was about the size of a goose's egg, was enucleated from a very adherent capsule; on account of its proximity to the site of the tumour, the femoral artery was ligatured in two places. The capsule of the tumour was plugged with lint soaked in perchloride of iron, and covered with dry lint maintained in position by means of a spica bandage. It was afterwards daily dressed with lint soaked in undiluted Condy's fluid. The first night was marked by restlessness and constant sickness. Doses of morphia, increasing night by night from a quarter to half a grain, were followed in one only of eight nights by sleep, and obstinate constipation only once yielded to medicine. On the seventh night some bleeding of the wound occurred, and a slight rigidity of the jaws was noticed. The bowels were opened on the following day by active purges, and increasing doses of morphia were given; but the tetanic symptoms increased. No better result followed the administration of ten-grain doses of chloral every four hours. The patient died on the eleventh day.

At the post-mortem examination the cerebral sinuses and vessels generally were found to contain an unusually large quantity of fluid blood; the vessels of the spinal cord exhibited a similar appearance, but the membranes and textures both of the brain and cord were healthy. Several nodules of the tumour were found deeply seated among the adductor muscles of the thigh in the intermuscular areolar tissue, which was widely involved; the muscles themselves and the femur were in a normal condition; the femoral and inguinal glands also were in a perfectly natural state; and the usual results of ligature were ensuing normally in the vessels which had been tied. In the wound itself a few loose sloughs were in process of separation.

Compound and Comminuted Fracture of the Lower Third of the Leg; lacerations of the foot; traumatic gangrene of the great toe; tetanus; secondary amputation of the leg; recurrence of tetanus; death.—The patient, Thomas N——, five years of age, was admitted with a severe compound and comminuted fracture of both bones of the right leg in the lower third; the wound subsequently sloughed, and the tendo Achillis became exposed. The great toe, which, on admission, was much injured, was on the fourth day found to be gangrenous. The limb was wrapped in a large linseed-meal poultice and covered with cotton-wool. Early on the sixth day the patient experienced a choking feeling in his throat. The muscles at the back of the neck and shoulder and the intercostals were strongly contracted, and there was spasm of the recti abdominis. The gangrene was not increasing, and the wound presented a healthy appearance. Two grains of calomel were not followed by action of the bowels. The leg was amputated at half-past three in the afternoon, and at four o'clock a fourteenth of a grain of morphia was injected into the stump. 5 P.M.: One-tenth of a grain of morphia administered by the mouth. 7 P.M.: The patient is much better, and has taken some milk. 8 P.M.: Improvement continues; there is slight opisthotonos. 10 P.M.: Is not quite so well; seems restless; he has taken a great deal of milk, and complains much of thirst. A tenth of a grain of morphia administered. Same dose repeated at midnight. At 5 o'clock on the following morning a spasm of the laryngeal muscles occurred, and the patient died asphyxiated.

At the post-mortem examination the brain and its membranes were found perfectly healthy, and presented no appreciable congestion; the spinal cord and its membranes were somewhat hyperæmic, but not markedly so; the texture of the cord was to all external appearance perfectly natural. The lungs were hyperæmic at their bases, the most congested portions floating readily in water. Firm post-mortem clots were found in the right cavities of the heart and several of the larger bloodvessels.

ST. GEORGE'S HOSPITAL.

CASES UNDER THE CARE OF MR. POLLOCK.

Phagedænic Ulceration of the Penis treated by the internal use of Opium.—The patient was admitted, a fortnight before we saw him, with phagedænic ulceration of the glans penis, probably of syphilitic origin, and has been treated according to the plan which Mr. Pollock invariably adopts in such cases. Fifteen drops of tincture of opium were ordered to be taken every four hours; but as, at the end of two days, the patient had not made satisfactory progress, the dose was increased to twenty drops, and was combined with half a drachm of compound spirit of ammonia. We observed that some loss of substance had occurred, but the appearance of the part was quite healthy, and cicatrisation was almost complete. With the exception of lint moistened with a weak solution of carbolic acid, no local application had been resorted to.

Contrivance for retarding Cicatrisation of a Burn.—This consisted of a piece of vulcanite cord of about the diameter of an ordinary drainage tube, which was suspended so as to occupy the angle of the axilla in a youth who had sustained a burn involving that part and the opposite surfaces of the chest and arm. The extremities of the cord were attached to two pieces of tape, one of which passed over the shoulder of the same side, the other over the opposite one. By this means it was maintained in apposition with the granulation at the apex of the axillary angle, over which almost every movement of the trunk caused it to glide more or less. By this means the process of repair will be hindered at that particular part until the remaining surface of the wound has been well covered by circumferential healing. It is hoped thus to provide, in some measure, against that considerable amount of cicatricial contraction which generally follows such injuries. This wound has not presented a surface favourable to skin transplantation.

The Treatment of Scrofulous Abscess of the Neck.—A young woman, who had been the subject of numerous scrofulous abscesses of the neck, afforded a striking demonstration of the results of different modes of treatment. Before her admission into the hospital some of these abscesses had been allowed to open spontaneously, while others had been freely laid open. In either case the result was an extensive ulceration, which exhibited but little tendency to cicatrisation. One abscess had not been opened when the patient came under treatment at St. George's. Into the lowest part of this a pin-hole puncture was made with a small knife of about the dimensions of a tenotomy knife. The skin, in this instance, had become adherent to the subjacent tissues, and the minute opening had healed without the spreading or intractable ulceration which still marked the openings of earlier abscesses. Mr. Pollock observed that it might be necessary, in similar cases, to pass a small probe through the minute aperture, at intervals of two or three

days, in order to ensure the complete discharge of the contents of the abscess.

A boy, in whom *resection of the shoulder* had been performed a month before, had a useful limb, with fair and painless mobility and scarcely perceptible shortening. The glenoid cavity had been found fairly healthy; but an abscess in the head of the humerus had destroyed that part and opened the joint. A thin line of granulations marked the incision.

A cachectic-looking woman, who had an ulcer of the leg of two years' standing, six inches in long measurement and which nearly met round the leg, presented a good example of the value of *skin-grafting*. Eight grafts had been taken from four different persons. Each of these had become vitalised, and, spreading at about the same rate, promised to cover, in a very short time, the whole of the granulating surface.

PROVINCIAL HOSPITAL REPORTS.

NORTH STAFFORD INFIRMARY.

OVARIAN TUMOUR IN AN INFANT; OPERATION AT THE AGE OF THREE YEARS.

(Under the care of Mr. ALCOCK.)

IN the following instance ovariotomy was performed at the age of three years, which is probably the earliest on record. Unfortunately the result was not favourable.

The patient was first seen by Mr. Alcock when about two years old. She then presented an enlargement of the abdomen, which was obviously due to an accumulation of fluid. Though she was pale-looking, her general health appeared to be good, and her movements were much less interfered with than the great distension of her abdomen would have led one to suppose. She had been noticed to be undergoing abdominal enlargement for six or seven months. On proceeding to tap the abdomen a few weeks later, Mr. Alcock first became aware of the real nature of the patient's disease, which, in consequence of her extreme youth, he had not up to that time suspected. On introducing a trocar he withdrew something less than a pint of clear straw-coloured fluid, and that only with some difficulty. By means of a probe passed through the canula, he felt an elastic body which was evidently the wall of a fluid-containing cyst. This he attempted to pierce by re-introducing the trocar and thrusting it backwards, but the cyst seemed to recede, and so to evade puncture.

The consent of the parents being withheld, no further steps were taken until about nine months later, when the child was admitted into the infirmary, and about nine and a half pints of fluid, which presented a remarkable appearance on account of the large amount of cholesterine it contained, was withdrawn from the cyst. Through the flaccid abdominal walls a large nodulated tumour could then be distinctly felt in the right iliac fossa. The umbilicus, which had all along protruded, retained its prominent position, and could not be made to recede.

A fortnight later, the abdominal puncture having healed, Mr. Alcock removed the tumour. The operation was accomplished only after tedious tearing and dissection, in consequence of the tumour being universally adherent, except in front, where there was a free surface large enough to allow of the introduction of the hand. The pedicle was secured with a ligature, which was cut off short and allowed to remain in the abdomen. No hæmorrhage of importance occurred; and when the patient had been replaced in bed she seemed as well as could be expected under the circumstances. She shortly, however, began to suffer from sickness, which was relieved by sucking ice and drinking small quantities of champagne. On the following day there were evident symptoms of exhaustion, and, about forty-eight hours after the operation, the patient died.

The bulk of the tumour consisted of a cyst with thick and rather vascular walls, within which numerous septa converged towards a common central mass. Near the pedicle was a number of smaller and independent cysts, several of which had been punctured in the operation in order to facilitate extraction. From the anterior wall of the main cyst there sprang a smaller one, of about the size of a walnut, which had occupied the protruded umbilicus, out of which it had been peeled with difficulty.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 27TH, 1871.

DR. ANDREW CLARK, PRESIDENT, IN THE CHAIR.

MR. ALFRED FREER (Stourbridge) communicated a case of Impalement, which, taken as a whole, is perhaps unique. On the 9th August, 1870, an Irishwoman, aged thirty-three, mother of two children, after having finished her work at the top of a corn-rick, chose to slide off the rick instead of getting down by the ladder. Someone had left a hay-fork against the stack with the handle uppermost. She slid down and lighted on the ground upright, impaled on the fork-handle. With much difficulty the fork was removed by a farmer. The accident was attended with hæmorrhage and symptoms of collapse. On examination, it was found that a large wound existed on the left side of the uterus, about two inches from the os cervicis, at the junction of the uterus with the left ligament, through which the fork-handle had passed upwards as high as the sixth rib, which it had fractured midway between the spine and the sternum. Considerable emphysematous crackling was discovered, reaching as high as the axilla. By the 6th September following the woman had recovered sufficiently to be downstairs and occupied in "washing." So speedy and complete a recovery after such an impalement was remarkable, as, beyond all doubt, the pike penetrated by the side of the body of the uterus, traversed the abdominal cavity, and, impinging on the diaphragm, pushed with such force against the rib as to break it. The recovery was to be attributed to the fact that the rounded, smooth end of the pike, in entering the body, had pushed the intestines before it.

Dr. WILTSHIRE communicated a case of Œdema of the Lung after Small-pox. Miss P—— had small-pox somewhat severely in July last, and six months afterwards there was a considerable amount of anasarca of the lower extremities. There was also a slight cough. One day the dropsy of the legs suddenly disappeared almost completely, and about twelve hours after severe dyspnœa, violent cough, and expectoration of enormous quantities of glairy phlegm came on; the attack was so severe that the patient's life was in great jeopardy. In addition to all the signs of œdema of the lungs, the heart was feeble, and there was a little but by no means marked amount of albumen in the urine, which latter was not scanty. The exhibition of repeated doses of compound jalap powder, ammonia, ether, and digitalis, swathing in hot blankets, and the administration of brandy, gave the patient great relief, and under this treatment she rallied and made a good recovery.

MR. WILLIAM ADAMS then showed a boy who was suffering from a webbed condition of several of his fingers. It was being treated by Mr. Tamplin's instrument.

MR. BRUDENELL CARTER demonstrated the following interesting ophthalmic cases:—1. A boy had received a blow on the eye, the lids being closed, with a cricket-bat. The ciliary nerves were either ruptured or damaged; there was also irritation of the sympathetic filaments, as the pupil was enormously dilated. The choroidal pigment was started through the tissues around the optic disc; the choroid itself was wasted below the disc. There was a white line at one spot; some would say it was a rupture of the choroid, but he did not think so himself. 2. A man suffering from double optic neuritis, probably from the presence of cerebral tumour; at present there were no cerebral symptoms. The outline of the disc was veiled by effusion and œdema, the veins tortuous and congested, bending in and out. 3. A case of albuminuric retinitis. Bright white spots were present in the retina, with splashes of hæmorrhage. 4. A boy who had sustained an injury to the head and spinal column. Hæmorrhage took place into the orbit, and protruded the ball of the eye. There was absolute loss of vision, the optic nerve being atrophied. After exposure to the full light of the instrument he saw a little at the outer and the inner quadrant of the field. 5. A case of syphilitic retinitis, nearly well. There was at the centre of the disc a little cloud over the vessels; the sight was but slightly impaired. The fibrous element of the nerve-tissue was affected. In a few words Mr. Carter explained the mode of

managing his new form of ophthalmoscope, which required no special skill; and pointed out the extreme value the instrument possessed in many interesting cases of general medicine.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOV. 24TH, 1871.

DR. G. OWEN REES, VICE-PRESIDENT, IN THE CHAIR.

DR. MOXON related a case of Intracranial Disease cured by Iodide of Potassium. The subject was a young man aged twenty-one, who was admitted into Guy's Hospital, under Dr. Moxon's care, having been ill six months. The illness came on with severe headache; in about three months ptosis and ocular paralysis of the left side commenced, and, as it went on, the left fifth nerve also became involved, and the right hand grew partially numb. When admitted he had agonising pain in the head. The left eye was intensely red, and its cornea ulcerated; it was almost immovable, and the lid was dropped. He could not feel moderate touches on the left face, nor taste salt on the left tongue, nor use the left masticating muscles. He had two slight seizures of a doubtful kind on the first two days after admission. Iodide of potassium was given in three-grain doses thrice daily, and the dose increased to a scruple. He gradually got better of all his symptoms. The pain left him very soon, the other symptoms more gradually. He was in attendance at the Society's rooms, and the state of his left face and eye was practically normal again. The points to which attention was directed were chiefly these: That this is the third case of syphilitic disease about the sella Turcica Dr. Moxon had met with. This he connected with the growth of the sphenoidal sinuses there, bringing in illustration the occurrence of exostoses very frequently about the frontal sinuses and of exostoses on the long bones at the region of the epiphysial cartilage; all these facts going to prove that the seats of late development are unusually liable to disease. Dr. Moxon believed that it was incumbent on everyone who had a case of local intracranial disease under his care to treat it at once with iodide of potassium, without waiting to make out its nature. He had not seen any serious ill effects from the iodide when taken to the extent of a drachm in the day for long periods. Slight salivation, a red rash, and catarrh were not common, though they occasionally occur; but they are by no means to be compared with local intracranial disease as alternatives. As to absorption of the testes, he had never seen it. The iodism of old authors was probably referred to the poisoning of the blood by the absorption into it of broken-down matter of goitres during their cure.

DR. ANSTIE read the further and concluding history of a case of which the earlier notes were read last session. It was an example of Neuralgia of all three branches of the fifth nerve, immediately excited by constitutional syphilitic infection, and which was of recent date. The case was one of a remarkable character. The nerve had been *predisposed* to neuralgic pain; many years before the syphilitic infection it had been the seat of an ordinary typical *migraine* of great severity; and at present it was very noteworthy that the painful and tender points were distributed, not according to the type of tertiary syphilis, but according to that of ordinary neuralgia. Moreover, a number of secondary lesions (unilateral facial anæsthesia, unilateral loss of taste in the tongue, unilateral spasm of muscles, &c.) were distributed exactly as such secondary affections were in severe neuralgias where there was no question of syphilis. Besides these curious phenomena, there were a series of paralyses of the ocular muscles, quite of the ordinary syphilitic type. Thirty grains of iodide of potassium daily completely cured the neuralgia, the anæsthesia, the loss of smell and taste, and the muscular spasms, in little more than a fortnight. The ocular paralysis proved exceedingly obstinate; but the prolonged use of iodide in larger daily doses (forty-five and then sixty grains) at last completely removed it. It was a singular fact that, during the full progress of the muscles towards recovery, unmistakable symptoms of iritis made their appearance; they were checked by a short course of mercury. Such a case as this was sure to be marked, in the future, by the repeated recurrence of tertiary syphilitic nerve-lesions.

DR. HUGHLINGS JACKSON thought there could be no reasonable doubt as to the correctness of the diagnosis of syphilitic disease. Dr. Moxon's remark that patient's who are cured of syphilitic affections of the nervous system are liable to suffer again was of practical importance. He (Dr. Jackson) thought unfavourably of cases of syphilitic affections of the nervous system, even after the symptoms had been promptly removed by drugs. He did not think the iodide was of value in removing hemiplegia which was the result of plugging of a syphilitic vessel, any more than it was useful in removing hemiplegia the result of embolism from heart disease. He asked if the patient had had a blow on the head, as he (Dr. Jackson) had frequently seen cases in which syphilitic affections of the nervous system followed severe blows on the head.

MR. BRUDENELL CARTER was of opinion, from the condition of the optic discs, that the disease was consequent on inflammation, and not on a tumour. He considered it going too far to say that iodide of potassium should be given, as a rule, in local intracranial disease; and believed that, in some cases, it was better to give mercury.

DR. BROADBENT said he had seen purpura produced by small doses of iodide of potassium, and had not met with much catarrh. He always prescribed ammonia with the potassium, and found that the remedy was borne better after a meal. He gave ten-grain doses of the iodide to begin with, as a rule; and had given drachm doses every four hours without effect.

DR. BUZZARD said that many of the cases of cranial paralysis presented no history of syphilis at all; and it would be interesting to know how far iodide of potassium can remove effusion in such cases. May there not be, in some of these cases of cranial-nerve paralysis, meningitis dependent on other causes—as, for example, rheumatism? Iodide of potassium, he had found, could be used as easily as bromide of potassium.

DR. ALTHAUS remarked that large doses of iodide of potassium are often borne better than small, and that liquor arsenicalis was a good corrective.

MR. HOLTHOUSE alluded to a case in which petechiæ were produced by the use of iodide of potassium. He had always looked upon the cases in which this drug did good as syphilitic; but it is often impossible to get a syphilitic history.

MR. LAWSON remarked that it is not frequent, as in Dr. Moxon's case, for bloodshot eyes to take place in ptosis. It is generally in the reverse condition that ulceration of the cornea takes place.

DR. ANSTIE, on the other hand, observed that it is not necessary to have the eyelid open to produce ulceration.

MR. BRUDENELL CARTER pointed out that Schiff and others had shown that, if the inner part of the fifth is paralysed, the cornea becomes ulcerated.

DR. GLOVER described a case of Uncomplicated Aphasia in a patient under his care at the Holloway and North Islington Dispensary. G. P——, aged sixty-three, an intelligent workman in a varnish and colour manufactory, came under treatment in the beginning of September with a very imperfect power of expressing himself, a furred tongue, high-coloured urine, and a weak pulse. The affection of the faculty of language was peculiar. Many words the patient could say quite well, but he was greatly embarrassed for want of the proper words. This appeared in his attempt to answer questions, and especially when asked to say what the names of particular objects were. Dr. Glover gave several curious illustrations. One day, on being shown a book and asked what it was, he said, "good," "house," "butter." On being asked to write the name, he said, "a good"; then he remembered the right word, and said "book." On a watch being shown to him, and being asked for the name of it, he said "*Tempus fugit*," but could not say the proper word; but, on being asked to write it, he wrote "watch." He called a ring "a knife," and purse "bug," "book," "bug," "a pocket-boqk." One day, after naming the door and the fire, and being asked the name of the window, he was greatly puzzled, and said, "fire," "glass and sash;" he was then quite confused for a few minutes, and being asked to write it, he put "finaway," "fender," "windway," "windway," "shot," "lock." Ten days later, being asked the same question, he said "windle," and quickly "a window." He seems to know when he answers wrongly, and is sometimes impatient and sometimes amused at his errors and his embarrassment. There was no other symptom of cerebral disease, no hemiplegia,

and either none or but the slightest difference in the sensation of the two sides. He walked well, wrote fairly, shaved well, and protruded his tongue straight. Dr. Glover remarked that the case was especially interesting for being simple and uncomplicated with any lesion of intelligence or of motion, such as right hemiplegia. There was nothing to indicate any affection of the left hemisphere more than one of the right, as M. Broca's remarkable theory supposed, which localised the disease in some lesion of the third convolution of the left frontal lobe. Seven or eight months ago the patient had had a similar attack, which only incapacitated him from work one whole day, by reason of the way in which he put wrong names on the varnish cases. The present attack began about eight o'clock one morning in the watercloset. He seemed to lose himself. He foamed at the mouth and fell down, but not quite unconsciously, for he tried to save himself. He lost his speech, but he spoke a little, cried a little, and seemed inclined to fret. He walked home with the help of a young man, who gave these particulars of the attack, and who thought that at the time the face was drawn to the left side. There was no drawing of the mouth since Dr. Glover attended him, and he saw him the day after the attack. Occasionally the heart and pulse were irregular. At other times, and generally, they were regular but weak. There was no abnormal sound. Mr. Carter had kindly examined the eyes, but the existence of lenticular opacity made it impossible to get any help in diagnosis from the state of the fundus. The patient's previous health had been good, excepting yellow fever in 1833 or 1834. He never had rheumatism or syphilis. The treatment at first was chiefly expectant. Latterly, ammonia and a little wine and beef have been its principal features. The aphasia had become rather less, though still persistent. Dr. Glover thought the symptoms might be attributed to either softening, or embolism, or slight extravasation, affecting a very limited portion of the brain, and inclined rather to extravasation, from the persistence of the aphasia, and the nature of the attack. The patient was present, and was examined by various members of the Society.

Dr. Baumler said that he had several times seen temporary coma produced by lead.

Dr. Glover, in answer to Dr. Bäumler, remarked that he had examined the patient and his history carefully, and found no evidence of lead-poisoning.

Dr. Hughlings Jackson thought that, since the patient made mistakes in words and could not express himself correctly in writing, the author was justified by usage in calling his very interesting case one of aphasia. Dr. Jackson suggested that this term should be restricted to cases of more or less *loss* of speech. A term was wanted for the other condition, disorder of speech—e. g., mistakes in words. He believed these two conditions were fundamentally opposite; and that the mental states of the patient were different. For example, in cases of loss of speech the patient readily understands what is said; whereas in cases where mistakes in words is the chief phenomenon, it frequently occurs that the patient does not readily understand what is said to him. He supposed that disorder of speech was more frequently the result of plugging of vessels, in young people especially, than of other pathological lesions, such as clots; but would not speak so confidently on this point as he had formerly done. The absence of hemiplegia, in cases of affection of speech, was very uncommon.

Dr. Anstie said that he had seen a case in which this confusion of the name of one object with another occurred during an attack of autumnal diarrhœa.

Dr. Moxon thought that aphasia meant that state in which words are forgotten, and cannot be used when repeated to them.

Friday, December 8th.

Dr. Burdon-Sanderson, Vice-President, in the Chair.

Dr. Broadbent related a case of Tumour in Left Half of Floor of Fourth Ventricle, with Tumour in Cerebellum. The patient, a child two years of age, came under his care amongst the out-patients of St. Mary's Hospital, on March 14th, 1870. Three weeks previously, the child had begun to have what the mother called "screaming fits," which only came to an end when it was utterly exhausted. She slept well, ate ravenously, drank much; the bowels were confined; and every morning there was vomiting before any food had been taken. On examination, the left side of the face was found to be paralysed, and the left eye was not closed, either voluntarily or in winking, or when the cornea was touched. There was no marked strabismus, but this eye could not pass the median plane of the orbit outwards. The right hand was clenched and agitated while the child cried, and was continually in motion when it was quiet. The left hand was quiet, or moved naturally. Both legs were continually in motion, the right most. There was little change during the five weeks in which the patient was under observation. The paralysis of the sixth nerve and of the portio dura of the seventh became more marked; the loss of power in the right hand more evident, the rigidity and agitation continuing. The screaming, vomiting, and constipation, were little affected by the treatment, which consisted in the application of a leech behind the left ear, and in the administration of an aperient powder, and first of chloral in ten-grain doses every four hours, later of belladonna in full doses. The child died on August 20th. A tumour was found to occupy the left half of the floor of the fourth ventricle, involving, as was anticipated, the common nucleus of the sixth and portio dura of the seventh nerves, shown by Stilling and Lockhart Clarke to be situated in the fasciculus teres, and in a less degree the already decussated motor tract from the right half of the body. Another small tumour was found in the left hemisphere of the cerebellum; but as all the symptoms were explained by the tumour in the floor of the fourth ventricle, it had probably not given rise to any characteristic symptoms. Both tumours were gliomatous in structure.

Mr. Brudenell Carter asked if an ophthalmoscopic examination was made, indicated its importance as an aid to diagnosis, and quoted a case in point.

Dr. Theodore Williams asked what exact symptoms were produced by the tumour.

Dr. Broadbent, in reply, regretted that no ophthalmoscopic examination had been made, and said that all the symptoms were precisely explained by the presence of the tumour in the fourth ventricle. Cerebellar tumours often gave rise to no other symptoms but vomiting.

Dr. Habershon narrated two cases of Disease of the Heart. The first instance was that of a young man aged thirty, who had been accustomed to great muscular exertion, and in whom the aortic valves were rendered imperfect by continued strain. Hypertrophy and dilatation of the left ventricle ensued; and the physical signs of aortic obstruction and regurgitation were accompanied by urgent dyspnœa and by paroxysms of angina pectoris. The mitral valve at length became so stretched that it ceased to act as a valve, and the indications of pulmonary and abdominal congestion became apparent. At this time a triple sound was audible at the apex of the heart, and continued for several weeks—till, in fact, the right ventricle became accustomed to the additional strain thrown upon it, and beat in unison with the left ventricle. After a time, a systolic bruit at the apex replaced the triple sound. The triple sound was explained by the want of synchronous action between the two ventricles. It has been noticed in rupture of the mitral valve, and also in cases of contraction of that valve; and in this instance it occurred for a short period in connexion with an overstrained mitral valve. The patient became slowly exhausted by the increased embarrassment of the heart and by dropsy.—The second instance was that of a child aged eleven, in whom severe cardiac disease, affecting the mitral valve, followed an attack of rheumatism. Three years previously he had the first attack, and had been ill for a fortnight before his admission into Guy's Hospital, on February 22nd, 1871. There was pain in the limbs; and, in the plane of the mitral, a loud systolic bruit, and a less distinct presystolic one, were audible. He improved in health till about the middle of April (12th), when the presystolic bruit became more distinct; and this indication of fresh disease was shortly followed by severe brain symptoms; vomiting and delirium, with hemiplegia on the left side, suddenly supervened; symptoms of great prostration followed, with convulsive movements of the right side; and, when consciousness was regained, he cried out and complained of pain in the head and in the spine. On the third day he began to rally, and in ten days the paralysis began to lessen, but the hand and arm recovered before the foot and leg. The presystolic

bruit also ceased, and the systolic mitral bruit alone remained audible. He left the hospital relieved on June 24th. The presystolic bruit was probably due to deposit on the mitral and consequent obstruction, and increased deposit led to augmentation of the sound. The cerebral symptoms were traced to embolism; and soon after the onset of these symptoms the presystolic bruit was diminished in intensity, as if the mitral, relieved of a portion of fibrinous deposit, acted more freely. The retrocession of the hemiplegic symptoms was in the inverse order from ordinary hemiplegia, from apoplexy—namely, that the arm recovered before the leg and the hand, and the feet before the shoulders and the hips. Very little medical treatment was permitted in this case, and it illustrated in a remarkable manner the natural subsidence of the symptoms of disease as the circulation of the brain accommodated itself to the temporary obstruction.

Dr. BAUMLER, in discussing the first case, quoted a similar instance that had come under his observation. Digitalis and iron produced great benefit; but in his absence opium was prescribed. Anasarca and suppression of urine set in, and mortification and death speedily ensued.

The CHAIRMAN remarked that the diagnostic interest of the case appeared to turn chiefly on the triple sound described, and the thin condition of the mitral valve.

Dr. C. J. B. WILLIAMS had often met with similar cases, and believed that the first sound depended upon the tightening of the whole mass of heart, and that if all parts do not tighten at the same time, an abnormal condition of things is produced; or it might be said that the two ventricles alternate in their action. He supposed that aggravation of the disease was due to the superaddition of mitral regurgitation to aortic disease, thus deranging the whole circulation. He believed in the beneficial action of mercury on such cases, particularly when combined with digitalis, as promoting the action of the liver and kidneys; and was convinced that opium did more harm than good, because sleep cannot be obtained on account of the intense orthopnœa.

Dr. BROADBENT remarked that the double stethoscope will, as a general rule, demonstrate the condition of things described by Dr. Habershon, and prove that a want of synchronism between the two ventricles may produce a reduplication of the first sound; that in cases of renal mischief the right has a start of the left ventricle, and in cases of lung disease, *vice versâ*. His belief in the efficacy of mercury in such cases was positive and defined.

Dr. LANGDON DOWN quoted a case of reduplication due to want of synchronism, which soon passed away under the influence of digitalis.

Mr. LAWSON wished to know in what position the patient was placed whilst paracentesis abdominis was being performed, and Dr. BROADBENT asked for a definition of "coarse kidneys."

Dr. HABERSHON, in reply, agreed with Dr. Williams as to the bad effects produced by opium, and believed that mercury combined with squill and digitalis was particularly useful in these cases. The chief point of interest in the case was undoubtedly the triple sound, which was heard most distinctly immediately to the right of the nipple, and towards the right ventricle. He was unable to state the position of the patient during the operation.

Reviews and Notices of Books.

A System of Medicine. Edited by J. RUSSELL REYNOLDS, M.D., F.R.S., F.R.C.P.L.; Fellow of the Imperial Leopold-Carolina Academy of Germany; Fellow of University College, London; Examiner in Medicine to the University of London; Professor of the Principles and Practice of Medicine in University College; Physician to University College Hospital. Vol. III., containing "Local Diseases" continued.

[FIRST NOTICE.]

THE appearance of another volume of Dr. Russell Reynolds's "System of Medicine" is an event in the profession. Three years have elapsed since the publication of the second volume, and two years intervened between that and the first. This is one of the inconveniences of the encyclopædic form of book, for the completion of which an author has to depend, as in this case, upon eighteen or twenty contributors. We are not prepared to say that the editor is altogether blameless for such intervals. It would certainly be to his interest to diminish them, and to give his readers the sense of cohesion between the different parts of his work. But the delay is not an unmixed disadvantage. Some of it is attributable to the fact that the writers are very much pre-occupied and engaged in practice, but this only adds to their authoritativeness, and to the interest of their contributions to a work which is meant to be practical as well as doctrinal. Another advantage of delay is that it admits of some readjustment of the teaching of the book to the actual facts of the day, and supplies the reader with a later account of the subject. Still we hope the editor will put a little more pressure on his friends, and hasten the completion of a work which has come to be regarded as the storehouse of systematic medicine. Before leaving the editor, and in a mood of real gratitude for a true *magnum opus* in medicine, he will forgive us for saying that we think he might have arranged and distributed his subjects better in some instances; thus to one writer is given the subject of peritonitis, and to another that of tubercle of the peritoneum. The article on peritonitis, really not a very common affection in its acute and idiopathic forms, occupies forty pages; that of tubercle of the peritoneum, a very important form of peritoneal disease, assuming generally more or less of an inflammatory nature, is disposed of in five pages. This volume contains an article on dysentery, which subject was treated of at full length in the first volume. The subject of waxy liver comes in at the end of respiratory diseases, altogether dissociated from the other articles on diseases of the liver. Repetitions and some variety of teaching are of course unavoidable in so great a series of articles on allied diseases. But so long as subjects are not really done twice over and the writers are fairly mindful of the proportionate importance of their respective pieces of work, this will not be complained of. Diseases touch each other and run into each other, and it necessarily follows that the writer on one subject trenches somewhat on ground occupied by another. It would be impossible otherwise to treat a subject completely as it ought to be treated in a systematic work. In second editions, however, of such a work as this, and looking upon it as a whole, the duty will devolve upon the editor to weed out what is superfluous, and to curtail or omit in one part what is amply discussed in another.

Owing to delay in the reception of articles necessary to complete the section on Diseases of the Circulatory System, the editor has changed the sequence of subjects in this volume, and made Diseases of the Respiratory Organs to follow Diseases of the Digestive Organs, begun in Vol. II. and finished in this volume. Volume III. begins with a description of Diseases of the Mouth, Fauces, Pharynx, and Œsophagus, by Charles Squarey, M.B.; Diseases of the Intestines, by various authors—as Dr. Richard Wardell, Dr. J. S. Bristowe, Dr. J. Warburton Begbie, Dr. W. H. Ransom, and Mr. Curling. Mr. Curling may, perhaps, feel himself in unusual company among so many medical celebrities; but his articles give a completeness to the subject, for which practitioners throughout the country will be thankful to him and the editor. Diseases of the Peritoneum are treated of by Dr. Richard Wardell and Dr. Bristowe; Diseases of the Liver, by Dr. Austie, Dr. Maclean, Dr. Goodeve, and Dr. Warburton Begbie; Diseases of the Pancreas, by Dr. Richard Wardell.

The Diseases of the Respiratory System occupy the last half of the volume. Dr. Morell Mackenzie has the Larynx all to himself. Diseases of the Thoracic Organs are distributed

thus: Emphysema, to Sir Wm. Jenner; Asthma, to Dr. Hyde Salter; Phthisis Pulmonalis, to Dr. J. Hughes Bennett; Cancer of the Lungs, to Dr. Hermann Beigel; Pneumonia, Syphilitic Affections of the Lung, and Brown Indurations, to Dr. Wilson Fox; Cirrhosis of the Lung, to Dr. Charlton Bastian; Apneumatosis, to Dr. Graily Hewitt; Bronchitis, to Dr. Frederick T. Roberts; Pleurodynia, Pleurisy, Hydrothorax and Pneumothorax, to Dr. Anstie.

These names are for the most part the best guarantee of the character of the articles of which the volume is composed. It is no slight merit in an editor to have been able to bring into one great work authors so various and withal so authoritative. It is, of course, impossible to go into a very minute criticism of the contents and the merits of each article. It will be enough if we try to give an honest estimate of the general work of each author, dwelling at any extra length only on such articles as appear to be of exceptional importance or to call for some special criticism.

Mr. Squarey's articles are for the most part short and sensible, but he is a little too fond of calomel in diseases of the mouth and throat, and there is a certain dogmatic looseness, to speak paradoxically, in his therapeutics. For example, in common sore-throat, we are told that "*in all cases* the treatment should be commenced with a dose of calomel at night, and followed next morning by the common black draught and some saline aperient." In common tonsillitis, again, we are told that *in all cases* the treatment should be commenced with free purgation, such as by a dose of calomel; and after the acute symptoms have passed, quinine and iron and *plenty of port wine* should be given. We believe that common sore-throat can be treated very advantageously, without either calomel purging at the beginning or "plenty of port wine" at the end, with warm-water gargling, suitable nourishment, and plenty of chlorate of potash. We regret that Mr. Squarey does not more specifically and separately treat of follicular tonsillitis—by far the most general form of sore-throat, much more so than common tonsillitis. He speaks of follicular pharyngitis, but in the commonest form of throat disease the tonsils are more affected than the pharynx. Here, again, he is faithful to his favourite purge; but the disease can be cured well without it, as we have indicated.

The articles by Dr. John Syer Bristowe are very good, such as that on Enteritis, on Obstruction of the Bowels, Ulceration of the Bowels, Cancerous and other Growths, and Diseases of the Cæcum, Tubercle of Peritoneum, &c. The description of diseased processes is very careful and clear, and the therapeutical principles are admirable. This we take to be a great virtue in this particular group of diseases. The value of opium, the need for reluctance and caution in using purgatives, are set forth with a great deal of judgment. The description of the various forms of obstruction of the bowels, that from stricture and from intussusception especially, and the account of diseases of the cæcum, are very valuable. The pathology of intussusception, and that of cæcal affections, such as typhlitis and perityphlitis, are worthy of very special study. We only regret that our space will not allow us to make extracts; but there are few articles in the book which give the sense of a combination of careful personal observation and knowledge of other men's work in a higher degree than the articles of Dr. Bristowe, and they abound in good suggestions as to practice.

The articles by Dr. Wardell are of various merit. That on Enteralgia and the one on Diseases of the Pancreas are very good accounts of our vague knowledge of the diseases in question. The article on Peritonitis is, too, a pretty fair account of the disease; but it adds little to our previous knowledge of peritonitis in its essential or idiopathic forms. The author correctly points out the infrequency with which the disease occurs apart from visceral disease, or the accident of perforation, or in strumous children, or in some form of blood disease, as puerperal fever. The article is open to some objection from the therapeutical point of view. Bleeding, leeches, calomel, and vesication occupy the chief place in his description of remedies. It is quite true the author comes to say at the end that peritonitis of the sthenic kind that will bear such treatment is not common, and then he enters on the value of opium, and says, what all authorities now admit, that opium is the principal remedy. We think that in any present statement of this subject opium should take the lead, and the other remedies should retire into an historical corner. In the Peritonitis of Children Dr. Wardell again reverts to the use of calomel and leeches and counter-irritation, placing opium and fomentation second to these. Dr. Wardell's therapeutics appear a little out of date; in fact, he goes out of his way to vaunt the use of remedies which he no longer finds valuable, and thus does injustice to himself out of deference to an old-fashioned order of statement.

The Beginning: its When and its How. By MUNGO PONTON, F.R.S.E. London: Longmans. 1871.

WE find Mr. Ponton's book an extremely difficult one to review. On the one hand, it is pleasantly written, and may be said to furnish to the general reader an intelligible account of the principal physical and biological questions of the day: such, for instance, as those relating to the nature and appearance of the sun; the amount of its heat and light; its action in the production of life; the structure of protoplasm, of cells, and of the lower classes of plants and animals; the theory of equivocal generation, and the Darwinian theory. On the other hand, some of the speculations in which the author indulges are of the most exuberant nature. The title of the book suggests, indeed, that the author intends to give free play to his imagination, but we scarcely expected to find a chapter devoted to *presolar* vegetation. Speaking of the coal measures, he remarks that, looking to the peculiar characters of these formations, to the different climatal conditions that must have prevailed on the globe while they flourished, and to the immense remoteness of the epoch when those needful conditions were likely to have subsisted, "it becomes a highly probable conclusion that that earliest vegetation clothed the surface of the earth long before the sun had begun to shine upon our globe, being sustained by those luminous and thermal vibrations which have been shown to have probably existed at the earliest of all physical phenomena, and before the establishment of any centre of motive energy." We have great respect for Mr. Ponton's opinions, but, looking to the peculiar character of the plants from the disintegration of which coal appears to proceed, we are disposed to believe that they did not grow before, but after the sun was established, and that George Stephenson was nearer the mark when he said it was that old solar heat and energy that drove his engines.

Again, in the second part of the work, which is a kind of Biblical exegesis, it is curious to meet with a serious disquisition on the precise mode in which the Creator formed Eve from the rib of Adam, and a solemn statement made that we should understand "that there was a cyst formed under the rib, a portion of Adam's flesh being enclosed in a membranous cell, &c."

Notwithstanding these grotesque discussions, the work contains a large amount of interesting information. The author everywhere shows himself well versed in modern science, especially in the history of development of plants

and animals, which is placed before the reader in an intelligible and attractive form. An excellent *résumé* is given of the discussion on protoplasm between Professor Huxley on the one hand, and Dr. Beale and Mr. Stirling on the other, as well as of the theory of spontaneous generation, with the views of Bastian, Tyndall, and Lister. The book is illustrated by numerous well-executed plates, six of which are devoted to the polycystinia; these represent the best series we have hitherto seen in an English work, and will doubtless aid in extending the knowledge and admiration of these exquisite organisms.

The Physician's and Surgeon's Visiting List, Diary, Almanac, and Book of Engagements for 1872. Twenty-sixth year of publication. London: J. Smith, Long Acre.

WE have received a copy of the twenty-sixth annual edition of "The Physician's and Surgeon's List for 1872," and we would strongly recommend all members of the profession, who desire to save time and trouble, to procure one. The publishers, we are bound to say, neglect no opportunity of increasing the usefulness of their book by meeting the requirements of their subscribers. A new feature in this year's "Visiting List" is the insertion of a table of doses, extracted from "Squire's Companion to the British Pharmacopœia."

Foreign Gleanings.

FREQUENCY OF LARYNGEAL ULCERATIONS IN SYPHILIS.

DR. SOMMERBRODT, in a valuable article published in the *Wiener Med. Press*, gives the following figures:—Out of 100 post-mortem examinations of patients affected with secondary syphilis performed at Prague, Kühle saw ulcerations of the larynx 15 times; whilst Altenhofer met only 25 cases among 1200 living patients. Gerhardt and Roth, on the other hand, found it 18 times in 54 syphilitic patients—viz., 11 times with 44 secondary patients, and 7 times with 12 tertiary ones. Out of 1000 syphilitic patients Lewin found 44 presenting an affection of the larynx and more or less hoarseness. Engelsted counted 25 laryngeal cases among 521 patients suffering from syphilis—viz., 14 cases among 292 men, and 11 cases in 229 women. Dr. Sommerbrodt himself collected cases for nine months at the Allerheiligen Hospital; and out of 84 patients with constitutional syphilis, 15 presented ulcerations of the larynx in different periods, and 14 had catarrhal affections with hypertrophy of the mucous membrane. These lesions seem, therefore, rather frequent, as already stated by Turck in his manual. Among 238 persons suffering from various laryngeal affections, says the author, 45 belonged to syphilis. Laryngeal syphilitic symptoms may occur in all the stages of the contamination. Turck, who has just been mentioned, observed it in a patient who had had primaries thirty years before; and Frankl has seen such ulcerations in a child two months old, with whom the first signs of syphilis had appeared one month after birth. The earliest time after primaries has, in Turck's time, been six months; in Sommerbrodt's, five months; and in Lewin's from two to three months. As to the seat of the lesions, it is indicated in the following table in reference to the 92 cases:—

Epiglottis		21	times.
True vocal cords	both 17, right 4, left 13	34	„
False vocal cords	both 2, right 0, left 3	5	„
Interior of larynx	superiorly 9, anteriorly 10	19	„
Aryteno-epiglottic folds		6	„
Upper opening		2	„
Right pyriform sinus		1	„
Lower portion of the larynx ...		4	„

It will therefore be seen that the vocal cords are the parts most frequently attacked, especially the left. This circumstance should be recollected, as, in Rheiner's experience, tubercular ulcers are mostly situated in the *right*. This peculiarity has a diagnostic value. It is, in fact, towards the upper part of the larynx that the syphilitic ulcerations are found.

REVERDIN ON SKIN-GRAFTING.

M. Reverdin, to whom belongs the discovery of this method (introduced Dec. 8th, 1869), has just sent a paper on the subject to the Academy of Sciences of Paris. The author states, among other matters already well known, that the skin may be taken either from different individuals of the same species or from subjects of different species. It is impossible in the operation not to include some true skin with the epidermis. By means of the microscope it has been found that the adhesion of the transplanted skin takes place, first, by the epidermis, and secondarily by the dermis. Also that the epidermis acts by contact (the catabiotic action of Gubler), so as to induce the contiguous embryonic surfaces to take the shape of epidermis.

ALCOHOLISM IN FRANCE.

M. Bergeron presented, Dec. 5th, 1871, to the Academy of Medicine of Paris, his report on essays by M. Roussel (representative) and M. Jeannel respecting the repression of this vice. The conclusion of the author is that, as regards eventual improvement, attention is to be directed to the moral training and education of the bulk of the population. As a more immediate remedy, M. Bergeron advises to relieve wines from the greater part of the duties now paid, and to lay very heavy ones on spirits. Nor should the penalties for drunkenness advocated by MM. Roussel and Jeannel be neglected. Punishment should be inflicted with due regard to individual liberty and the rights of the insane. The report will shortly be discussed by the Academy.

BRITISH MEDICAL BENEVOLENT FUND.

To the Editor of THE LANCET.

SIR,—Will you kindly permit me to make a Christmas appeal to your readers on behalf of the British Medical Benevolent Fund, a charity which, I venture to say, has a strong claim on the practical sympathy of all our brethren. Help promptly given, help quietly given, is, I may say, a distinguishing feature of this Benevolent Fund; and I might add, help carefully given, and help inexpensively given; for I can assure you that I know of no society whose meetings are more regularly or better attended than the monthly committee meetings at 11, New Burlington-street, while the only paid official is the collector.

The cases relieved by grants during the past eleven months are 102; but, inasmuch as some of these cases represent large families of children, the number assisted is really much greater. £834 has been thus expended, and to meet the cases which arise this month, our treasurer had at its commencement a balance remaining of about £20 only.

If it were not for fear of trespassing too largely on your space I should like to give you the details of a few cases, as specimens of the want and misery I ask your readers to assist in alleviating—want and misery all the more bitterly felt as in most instances the sufferers have been at one time or other in comfortable circumstances. Donations or subscriptions, however small, will be thankfully received by the treasurer, Dr. Hare, 57, Brook-street; the honorary financial secretary, C. S. Webber, Esq., 1, Upper Berkeley-street, West; or by your obedient servant,

STANFORD FELCE,
Hon. Secretary.

12, Chippenham-road, W., Dec. 12th, 1870.

P.S. Articles of clothing for men, women, or children, I am always glad to receive for our applicants.

IN connexion with the Gilchrist Education Trust, arrangements have, we understand, been made for the delivery at the Lambeth Baths of a series of lectures, chiefly of a scientific character. The names of Professors Huxley and Carpenter are mentioned as among the probable lecturers.

THE LANCET.

LONDON: SATURDAY, DECEMBER 16, 1871.

THE PROGRESS OF H.R.H. THE PRINCE OF WALES.

THE information which we have received, just before going to press, with regard to the condition of H.R.H. the Prince of WALES, and upon which the public may thoroughly rely, is to our minds of a most reassuring character, considering the very precarious state in which the Prince was up to Wednesday. On that night he recognised the QUEEN. He had a tolerably quiet night, and in the following day some hours' sleep at intervals; all the symptoms of febrile disturbance meanwhile having diminished, and the strength of the pulse at the same time improved. The condition of the bronchial tubes, which has given rise to much apprehension in the minds of the physicians of His Royal Highness, has sensibly ameliorated. The general strength, we are glad to say, is unquestionably a trifle greater, and, what is of vital moment, the Prince takes the needful nourishment well. We do not attempt to enter now into the past history of the case, for the public mind is fixed with grave anxiety on the present state of His Royal Highness, and the probabilities of his recovery. We can find no words to express our thankfulness and joy that we can communicate such good news as the above, which indicates that whilst there is a cessation of the complications that immediately jeopardised the Royal patient's life, not only is his circulation beginning to recover itself, but consciousness is satisfactorily returning, and the nutritive functions are again coming into full play. Verily the Prince lives! and, we believe, will now recover, though his convalescence must be long and tedious. The report of the visit of Sir JAMES PAGET to Sandringham is unfounded.

THE CAUSE OF THE ILLNESS OF H.R.H. THE PRINCE OF WALES.

WE have thought it necessary to institute a thorough re-examination of Londesborough Lodge, and of the circumstances connected with the illness of His Royal Highness the Prince of WALES. We have also made special inquiries as to the illness of a butler suffering from typhoid fever, who was present in the Lodge throughout the Royal visit. The result is that there is now overwhelming evidence to prove that the Prince's illness was contracted in the way suspected in our report last week. The general accuracy of the conclusion we then arrived at is rather strengthened than impugned by the correction of mistakes due to the misrepresentation of persons employed upon the premises. These mistakes tell both ways. It is certainly a point of great importance that the soil-pipe of the watercloset used by the Prince of WALES should not have been trapped as represented. Of still greater importance was it that the 4-inch rain-pipe was in direct and uninterrupted communication with the drains; but the contrary was distinctly stated in the certificate of the architect and contractor published in *The Times*, and it is certainly trapped now. But by far the gravest error was the one which placed a syphon valve on the main drain of the house inside the outer wall. This trap would certainly have excluded sewer gas, except during violent action of the tides. But unfortunately it existed only in the imagination of the contractor; and, as it was admitted that a trap has been recently placed outside to obviate a back draught into the house from the outside sewer, it is certain that such a back draught was present during the Royal visit, and that there was nothing but water-traps, liable to be broken by the tide, to prevent the admission of sewer air into the body of the house.

It is much to be regretted that a mistake was made as to the return of Lord CHESTERFIELD to Londesborough Lodge after his departure on November 4th. The information was derived from the housekeeper. It is now well ascertained that Lord CHESTERFIELD slept there for a fortnight (Sundays excepted), and that he left on the 21st of October, returning on the 31st, and then sleeping at 3, Belvoir-terrace, until the termination of the Royal visit. Circumstances have, however, transpired to make it probable that, in his case, the period of incubation was considerably prolonged. He was expected at Londesborough Lodge on the 30th of October, but he only arrived on the 31st, because he was already unwell at that date. But the most important link in the chain has now come out. Mr. FROOME, under-butler to CHRISTOPHER SYKES, Esq., M.P., was summoned by telegraph to supply the place of Lord LONDESBOROUGH's butler, who was taken ill. He went to Londesborough Lodge on Tuesday, and remained there until the following Sunday. He slept at the Royal Hotel, but he was at the Lodge from 6 A.M. until midnight, or later when supper was required. The sanitary arrangements of the Royal Hotel are very superior; all the soil-pipes are open to the roof, and there are as many as sixteen 4-inch down pipes, through which the sewer-gases very readily escape at well-protected points. No one has been attacked with any form of fever in this hotel. The room in which this man sleeps at Brantingham Thorpe is all that can be desired, and there has been no typhoid fever there. Yet since his return from Londesborough Lodge, this man has been seized with what is now well-developed typhoid fever. He left Londesborough Lodge on November 5th. On the 19th, fourteen days after, he was feeling ill. On the 27th, and for some days previously, he was unable to do his work, and on the 28th he took to bed. There are now characteristic spots and tongue, and although the disorder is mild, its history is clear, and its diagnosis perfect.

This case would seem to prove—first, that it was not necessary to sleep in Londesborough Lodge to take the infection; second, that the period of incubation may be considerably prolonged, for although there were early symptoms of blood-poison, the nature of the case was not clearly shown until a month after exposure to the cause. This history clearly shows that it is quite possible that Lord CHESTERFIELD took the poison anterior to Oct. 21st,

when, in fact, he was occupying the bedroom of the Prince of WALES. But whether or not, it proves that he took it at Londesborough Lodge. It also effectually does away with the supposition that the poison emanated from the shooting covers.

It is entirely erroneous to state that only three persons were unwell at Londesborough Lodge, and illogical to state that their maladies could not have arisen from impure air, when we know that they are often so produced. At least one other of the party suffered from diarrhœa without consulting Mr. DALE, and he observed that there must be something the matter with the drains; whilst we have now records of three cases of typhoid fever, all of which may be fairly, and at least in one case certainly, referred to Londesborough Lodge. Besides, we have other evidence extending over several years, which we shall reserve unless further challenged, showing that the drainage of the Lodge has never been in a better state than now.

But a little further consideration will show what a really dangerous state the house was in. The rooms are small and without a tittle of ventilation. Probably, out of consideration for the rheumatic tendencies of H.R.H. the Princess of WALES, the doors and windows were religiously kept shut. In the basement, the servants' hall, butler's pantry, housekeeper's-room, and still-room were fully occupied both by night and day. Add to this densely-crowded household some seventeen attendants on the Royal party who slept at the Royal Hotel, five or six helpers in the kitchen, as many visitors to dine, and no one can say how many lookers-on. It is evident that during a certain part of the day the number of occupants was at least doubled; and, what with large fires and cooking, it seems difficult to conceive that the internal air was maintained in a reasonable state of purity. Painful as it must be to Lord LONDESBOROUGH's feelings, it must yet be satisfactory to him to know the truth. The evidence is irresistible; and we can only hope that the nobility will not henceforth be satisfied with the reports of local architects and contractors, who have sometimes a very imperfect knowledge of sanitary laws; indeed, we wish we could altogether acquit our most distinguished architects on this vital point. Pure air and ventilation are far too often sacrificed to a grand elevation; and there is a fatal idea that bricks and cement can be made to keep down stinks. The fact is that the subject belongs as much to the physician as to the architect, since it is the former who can alone appreciate the danger of sewer emanations, and estimate at their proper value the safeguards employed.

THE people of this country are moved as one man by a single fear and animated by a single hope as they watch with absorbed sympathies the ebb and flow of the Royal patient's life at Sandringham. Never before that we can remember has the bearing of all classes exhibited the strength of that common band of sorrowful sympathy by which we are all bound together as a nation. We hope and believe that the lesson will not be lost. Politically, the last week has shown our attachment to constitutional government, by arousing the latent but strong affection with which we all regard the Royal Family; and, from a sanitary aspect, we may at last fairly hope that the Legislature will turn its attention to the subject of diseases like typhoid fever, with the view of preventing or limiting the wholesale loss of life which they annually entail upon us. In truth, the disease under which His Royal Highness is suffering is a most important one, from whatever aspect it be regarded. It kills more people than any other acute malady, and it gives rise to long and serious illness and protracted convalescence in those it does not kill. Nor is it a disease that is limited to this country; for, geographically, it may, almost without exaggeration, be said to extend from arctic to tropical climates, and to be met with from the Himalayas to the Falls of Niagara. Typhoid fever is insidious in its course; it is subject to various degrees of severity as regards its progress and duration; and it may be termed treacherous in its nature, on account of the complications which may arise during its development or follow in its track. We cannot pretend, of course, to do more than allude to a few of these within the limits of a single article; but the stage which the Prince of WALES has now reached makes the complications of typhoid fever a pertinent and anxious matter of consideration. It is now thirty-three days since His Royal Highness was attacked. The course of the disease has been long, and its character very severe. Under such circumstances we might expect that the dawn of any marked improvement would not have occurred until the fourth week, or even later. Without inspecting the temperature-chart, we cannot state whether any of the characteristic quotidian vacillations of temperature that mark the stage of defervescence have appeared in the Prince's case. The duration of the fever, as distinguished from that of the illness, varies remarkably in different cases. It is not to be counted by days, for all averages are utterly inapplicable as regards individual cases. It cannot be said to have terminated so long as any fresh spots make their appearance, and we may take this as marking the limit of the true fever stage. According to Sir WILLIAM JENNER's experience, these do not manifest themselves after the thirtieth, or, according to Dr. MURCHISON, beyond the thirty-fifth day. Of course we are excluding all those cases of what are improperly termed relapses of the fever, where, when the rôle of the morbid processes has terminated in the intestinal structures originally involved, there is a repetition of the same phenomena in other structures not previously implicated. The prolongation of the fever much beyond the fourth or fifth week may commonly, at any rate, be regarded as due to some complication.

Such complications may usually be referred to the abdominal or pulmonary organs; and it is the latter especially that cause such anxiety in the case of the Prince of WALES. In a case of such severity as that of His Royal Highness the infiltration and swelling of the intestinal lymphatic glands must have been great; and there is no reason to doubt that the disintegration and elimination of the diseased products involved considerable destruction of tissue in the concomitant ulcerative or sloughing processes. There appears to have been intestinal hæmorrhage—a symptom the gravity of which is, to our minds, in direct ratio to its amount; for we can with some degree of certitude predicate its source from this circumstance. Where the hæmorrhage

is large, and occurs at a late stage, its source is probably a vessel implicated in the glandular ulceration; whereas, where the quantity of blood is small, it has probably proceeded from a fungating ulcer, or has oozed from a congested gland structure. We may confidently expect, in the Prince's case, that these diseased structures, in most of the affected glands, have been already shed into the intestine, and removed by the diarrhœa; and we may even hope that the third stage, or that of cicatrisation, has commenced in some of the ulcers. During the time of this disintegrating process, which is sometimes taking place during the third or the fourth week of the disease, besides the increase of temperature, febrile commotion, and aggravation of the general symptoms by which it is attended, there is the danger of contamination of the blood by the direct passage of particles or infecting material of some kind from the disintegrating gland structures into the veins. And there is very little doubt, we think, that many of the graver pulmonary lesions—such as the consolidations in lobular pneumonia of typhoid fever—may be explained in this way. Besides this, there are several morbid conditions that may be referred to the state of the blood and tissues, and the position of the patient—such as œdema of the lungs, and that congestive form of pneumonia at the back part of these organs, due to position and the diminished propulsive action of the heart, common to typhoid and other specific fevers. A bronchial catarrh is also a very frequent complication; and this is often attended by collapse of the lung-tissue. Sometimes, as in the case of the Prince, the bronchitis is so severe as to threaten dissolution by embarrassing the heart's action to such an extent as to induce cardiac paralysis and suffocation. Pleurisy and inflammatory exudations into the pleural sac are also common; and the ulceration of the laryngeal mucous membrane may be one of the causes of that rare complication of general emphysema which has been especially noticed by observers in North Germany, some English army surgeons, and by Dr. WILKS. From some of the symptoms it might be inferred that a laryngeal affection was one of the complications present in the Prince's case. Lastly, tuberculous disease of the lung must not be forgotten as an occasional sequela of typhoid fever.

Grave as these pulmonary complications doubtless are, we need scarcely remind our readers that they are by no means of the serious and wellnigh hopeless character of some of those complications and accidents that may ensue from the perforation of an intestinal ulcer, or follow the occurrence of severe hæmorrhage from the bowels. In the one case, the result is necessarily and speedily a fatal one; and in the other, it is the cause of intense anxiety as to its source. Assuming that the intestinal ulcers are free of all specific deposit, but unhealed, there is still the danger that they may become *atonic* or indolent, and the liability to chronic diarrhœa, or even to perforation under such circumstances during apparent convalescence, must never be lost sight of. Setting aside peritonitis from perforation of the bowel, it is agreed, on all hands, that in typhoid fever there is almost no condition, however low, and no symptoms, however severe, from which a patient may not rally and recover.

We think it right to caution the public against much of the information that has during the week appeared in print. We speak advisedly, and with authority, when we state very emphatically that the bulletins, as they are the official, so they are the only trustworthy sources of information.

THE last part of the *Zeitschrift für Parasitenkunde* contains a paper by Dr. OTTMAR HOFMANN, who is a staunch supporter of HALLIER'S views respecting the origin of many contagious and infectious diseases from fungi, "On the Rational Treatment of the Acute Exanthemata, and especially of Measles and Scarlet Fever." Long experience, he maintains, has shown that we possess in the numerous drugs that have been at one time or another prescribed no cure for these diseases, or, as he puts it, no means of killing the fungi to the presence of which the symptoms of the special affection are due; unless, perhaps, we except quinine, the good effects of which in typhus have been shown by the excellent researches of BINZ, and corroborated by many observers. BINZ himself admits, however, that, to produce any destructive action on the spores of these fungi contained in the blood, quinine must be given in such large doses as to render it a remedy which it is not advisable to prescribe in the case of children, especially when they are in such a condition of somnolence as to render its introduction into the system difficult, if not impossible. Seeing, then, that the spores cannot be destroyed in the blood, the most rational plan of treatment is obviously to effect their elimination from the system; and this he maintains can be effected by the skin. He accordingly adopts a hydropathic system of treatment, consisting of swathing the patient with damp cloths, and then covering him with a linen or woollen wrapper in the usual manner, by which means free perspiration is induced, the temperature of the cloths and the frequency of their application being of course regulated by the degree of the fever present. Were his views correct, it is obvious that the perspiration should contain micrococcus spores. To determine this point he collected the fluid discharged by the skin in the case of a little child of four years of age suffering from a severe attack of measles and treated on this hydropathic plan. The fluids were at once transmitted by Dr. HOFMANN to Professor HALLIER, who reported that they contained large quantities of micrococcus, and that he was about to undertake a series of researches on its culture to determine whether it was the true fungus of measles or not.

We are by no means disposed to adopt Prof. HALLIER'S views, and should be glad if these statements were criticised by other observers.

WE have to record the marriage of Lady Agnes Campbell, widow of Sir Archibald Campbell, of Succoth, and daughter of the late and sister of the present Marquis of Westminster, to Dr. Philip Frank, late of the Army Medical Staff, a gentleman who distinguished himself last year in the service of the National Red Cross Society for the Aid of the Sick and Wounded. Dr. Frank has been, and, we believe, still intends practising as a physician at Cannes, where he has for some time taken up his residence.

Medical Annotations.

"Ne quid nimis."

MEDICAL INSPECTION OF SEAMEN.

DURING the past few months several important official inquiries have been conducted by the Marine Department of the Board of Trade relative to outbreaks of scurvy on board ship, and we believe that returns of these inquiries will be moved for when the Houses resume their sittings. We are, however, enabled to state generally that the result of evidence gleaned by the medical inspector of the Board of Trade point to two distinct reasons why the disease appeared in the vessels under consideration. The direct cause was in one case shown to be want of antiscorbutics, and in another irregular administration of them. In most other cases men were shipped unhealthy in a greater or less degree. Some were suffering from primary or secondary syphilis, some were the subjects of organic diseases of the thoracic viscera, and others were so enfeebled by dysentery and other chronic maladies that the addition of scurvy to their other ills was by no means a surprising event. We know that since the introduction of the Duke of Richmond's Act this eminently preventable disease has decreased in the British mercantile marine at least 50 per cent., and it may be presumed that shipowners and captains are now convinced as to the utility of antiscorbutics of good quality, regularly given and taken, though we still believe, and are bound to maintain, that proper scales of diet would do away with the limejuice business altogether. But, whether limejuice be taken to correct the baneful effects of faulty food, or a varied diet be given, it is plain that if healthy crews are not shipped scurvy will sometimes make its appearance. There are 106 chief ports in the United Kingdom, at 71 of which medical inspectors of seamen have been appointed either by the Board of Trade or the Local Marine Boards. The fee for the medical examination is officially fixed at 2s. per man. This sum is charged to the owner of the vessel, so that the master of a ship can, by an expenditure of from a guinea to forty shillings, be assured that he will start fair with a sound company. It appears almost incredible that, since the Act came into operation in the beginning of 1868, only six inspectors have had any work at all to do, and that London, Liverpool, and Glasgow—our largest and wealthiest ports—do not possess an inspector, because the Local Marine Boards at these places have ignored this section of the Act altogether. But we may fairly hope that the mind of the British shipowner and of his captains is being educated to the proper contemplation of this question. We believe that the Board of Trade returns, shortly to be published, will show very conclusively (and that in a commercial as well as in a hygienic sense) that it is better to spend a few shillings when crews are engaged, than to pay wages to men who have not earned them, to waste time and money at foreign ports about a sick crew and their substitutes, and to run the gauntlet of an official inquiry when the ship returns home, with all its attendant annoyances.

SMALL-POX.

THE extent to which small-pox is now prevalent in different parts of the country, and the disposition of the epidemic in many places to recrudesce, are matters which we hope will not escape attention even at a time so occupied as is the present with the gravest national anxiety. The Registrar-General's Return has for the last few weeks given anything but a satisfactory account of the health-condition of London and the other large towns, as manifested in their high death-rates from all causes; but the most significant feature in this mortality is the large share of it caused by small-pox. In the seventeen towns (including London) the fatal cases have risen successively during the last five weeks from 153, to 197, 209, 237, and 255; in London they were more numerous last week than in any week since the end of July. The annual death-rate from this disease was last week 22 per 1000 persons living, in Wolverhampton; and 14 in Norwich; and this is now the third week in which small-pox has caused one-third of the aggregate mortality in these two towns. The fact that one preventable disease should, for two weeks in succession, have occasioned in Wolverhampton a mortality very nearly equal to the average annual gross death-rate of the whole English population is most lamentable. How many of these Wolverhampton victims have been sacrificed to the anti-vaccination delusion is not stated, but it is only too probable that the state of things in that town differs little from that in Sheffield, where, out of 43 fatal cases occurring in the week before last, nearly all were unvaccinated. From numerous other quarters we hear also of the prevalence of small-pox, and it is clear that there is need for the utmost vigilance and activity on the part of the local authorities, not only where the malady now exists, but everywhere throughout the country, if the epidemic is to be prevented from again becoming general.

Some cases of the disease have lately occurred among the troops at Woolwich, who, owing to the precautions that had been taken, have been hitherto relatively very free from it, considering the extent of its prevalence in the metropolis and neighbourhood. It seems that small-pox is prevalent among the civil population in some districts of Woolwich.

THE PORT OF LONDON AND LOCAL SELF-GOVERNMENT.

A CASE of choleraic diarrhœa, existing in a vessel that arrived at Gravesend from Copenhagen some few days ago, was discovered by the Customs authorities, who detained the ship for twelve hours, and duly reported the fact to the local authorities at Gravesend. No notice was, however, taken of the matter. The vessel proceeded up the river in the usual course of work to discharge, and, if the man has recovered, all of course, so far, is well. But we may fairly ask, What are the Thames Shipping Inspection Committee about? We were told some two months ago, with a great flourish of trumpets, that unanimity was at last established among the local authorities theoretically responsible for the sanitary condition of the river; that West Ham was the only recalcitrant district; that the Committee of Inspection met regularly at the offices of the Commissioners of Sewers in Guildhall; that they had appointed a secretary and a medical superintendent; and, in fact, that everything was *couleur de rose*. Where is the superintendent, and what is he doing? We are told, upon very good authority, that the Metropolitan Asylums Board is keeping the old *Dreadnought* hospital-ship in working order at the express request of this Thames Committee, and is of course incurring a considerable expenditure thereby. Meanwhile there is absolutely no hospital of any sort or kind at Gravesend to which suspected or pronounced cases of infectious disease that arrive at the mouth of the port can be sent. The advice and warnings of Dr. Buchanan appear to have availed nothing; and so a vessel with cholera on board may drift up the river into the very centre of the Committee, the members of which appear to be unable either to count the cost, or to appreciate the responsibilities that they incur from their present system of inaction. As the law now stands, the authorities of the districts through which the Thames flows are legally responsible for all that occurs

(in matters relating to health) upon its waters; and if some system of permanent sanitary surveillance be not soon established between London-bridge and Gravesend, these authorities will have to pay very smartly indeed when the next epidemic reaches the metropolis.

THE COSTLINESS OF TYPHOID.

The Times of Tuesday contained a calculation that would be startling to the uninitiated, concerning the cost of typhoid fever. The data assumed are an average of 20,000 deaths annually, a mortality of 1 in 6, a value of £100 for each life lost, and a cost of £12 per case in loss of labour and expense of maintenance. Upon these bases the cost of typhoid during ten years, or since the death of the Prince Consort, would amount to the amazing sum of more than thirty-four millions sterling (£34,400,000), a calculation to which it would be perfectly fair to add interest to the amount of eight millions more (£8,000,000). Of course such data must be conjectural; but they have a manifest basis of reality, which will enable them to serve as a rough measure of the extent of an evil which we have hitherto tamely endured.

The same article contains also a suggestion of a practical kind, which will, we think, at once commend itself to the common sense of the profession as a means of obtaining sanitary reform. It is that the occurrence of typhoid fever should lead to a *quasi* judicial inquiry into its causes, and that any person or corporation found by a jury to be responsible by any act or default for its production should be liable to pay pecuniary damages to sufferers or their representatives. There can be no doubt that such an enactment would rouse the British owner or occupier to intense and watchful activity, that it would introduce stringent clauses into all contracts with architects and builders, and that it would produce an amount of sanitary reform such as no inspection could ever secure. Moreover, it might be passed into law without the interminable battles and compromises which would be sure to take all the pith out of any originally "comprehensive measure," and to leave it riddled with holes through which the coaches-and-six of powerful monopolies and of vested interests might pass without let or hindrance.

METROPOLITAN CHARITIES.

MR. CHARLES MACKESON has forwarded to us an article on the metropolitan charities of the present day, which he has contributed to the "Year Book, or Companion to the British Almanack" for 1872. In this, a brief *résumé* of the working of the several institutions designed for the relief of suffering humanity is given, and first among these are rightly placed the general hospitals of London. After briefly enumerating them and calling attention to the "ninety distinct organisations for special objects," Mr. Mackeson alludes to the labours of the committee of the Charity Organisation Society with which our readers are familiar, and remarks on their proposals:—

"The remedy proposed is to establish provident dispensaries in the various districts of the metropolis, and, as far as possible, throughout the kingdom, at which the medicines and advice now given on the out-patient system would be administered at a low tariff of charges, thus tending to encourage independence and self-reliance among the members. This is, undoubtedly, a wise proposition, but we question whether the committee is not inclined to overstrain its principle to some extent, and its belief that 'many of the 54,175 out-patients relieved in 1870 were well able to defray the charges of a local practitioner,' and that 'a still larger number were quite in a position to pay the 6s. or 8s. a year required for securing advice and medicine when ill,' is, we believe, scarcely capable of support from actual experience."

We may comfort Mr. Mackeson with the assurance that, to the best of our belief, the committee has not over-stepped the mark in its statement, and we can bring to bear upon the question the actual experience of the practitioners in the neighbourhood of Newington, who found that when St. Thomas's Hospital settled down in their neighbourhood, their patients were attracted to it in large numbers, but are now returning to their former advisers since the charity has returned to the banks of the Thames. The same thing has, we learn, been experienced in the neighbourhood of University College Hospital, where the out-patient department has recently been placed under more strict supervision.

On the question of the formation of Provident Dispensaries Mr. Mackeson says—

"The difficulty will of course consist in inducing people to submit to the test of the committee as to their being fit objects for membership; but as this is the keystone of the scheme, it would be absurd to propose any deviation from the rule, although, in many dispensaries already at work, the fact of persons making application for admission is deemed a sufficient qualification, the presumption being that they would not come in *formâ pauperis* unless they were compelled to do so—a theory which has also been adopted in the distribution of out-patients' orders for the hospitals."

A summary of the Asylums, Funds, and Benevolent Institutions of London completes the article, which possesses much interest for those engaged in charitable works; for whose benefit also we may mention that Mr. Mackeson is preparing a new edition of Low's well-known "Handbook to the Charities of London."

SEA-WATER AS A TONIC.

AT the meeting of the Académie des Sciences of Nov. 27th the perpetual Secretary stated the remarkable fact that excellent bread can be made with sea-water instead of ordinary spring-water, and that this bread appeared to constitute an excellent tonic. Soup or broth, on the contrary, made with sea-water proved totally uneatable. M. Boussingault reminded the members that various peoples living on the seaboard of America drank sea-water after the previous addition of some fragments of cane sugar. From the former of these facts, it would appear that the chloride of magnesium during the process of baking is raised to a temperature sufficiently high to effect its destruction, which does not occur when it is merely boiled as in making soup. In the latter case, it would seem that when cane sugar is added to it, a compound is formed of the sugar with the chlorides which has not the disagreeable taste of the latter. A commission, composed of MM. Chevreul, Boussingault, Balard, Jules Cloquet, and Dumas, has been appointed by the Academy to investigate the question.

PORTHCAWL CONVALESCENT HOME.

THERE has been for the last eight years on the sea-coast of Glamorganshire, near Porthcawl, a little institution which, under the name of "The Rest," has been doing good service to the poor of the neighbourhood as a convalescent home. It has hitherto consisted of a few cottages, accommodating at one time about sixteen patients, with the necessary officers, and has been entirely managed and supported by Dr. Lewis, of Maesteg, aided by a few private friends. That gentleman has now conceived the idea of widening the basis of its operations, and throwing it upon public support. After having brought his scheme before a meeting of the South Wales Branch of the British Medical Association, he, on the 27th ult., called a public meeting at the Town Hall, Cardiff, the mayor, in the absence of the Marquis of Bute, filling the chair. The meeting was very

well attended, and it was resolved to erect a suitable building to hold 100 patients. An excellent site was offered by the Rev. E. Knight, and accepted, and an influential committee was appointed to carry out the project. The subscriptions already amount to about £3000, and promises of help are being continually received from all parts of Glamorganshire, and the adjacent counties, to the poor of all of which it is intended that the benefits shall be open. We wish the scheme success, and hope that an institution like the Porthcawl Convalescent Home, which promises so large an amount of good to the poor of South Wales, may have a long and prosperous career.

SIR ALEXANDER ARMSTRONG, K.C.B.

SOME surprise may have been excited in the minds of some of our readers on noticing in last week's *Gazette* that the Director-General of the Medical Department of the Navy had been placed on the list of retired inspectors of hospitals. This retirement from the active list is in compliance with the regulations of the recent naval warrant, by which retirement in the higher ranks of the service becomes compulsory when an officer has remained five years without active service; but in no way affects the post of director-general, which is, in fact, a civil appointment. As it would, of course, be impossible for a retired director-general to serve in the rank of inspector, Sir A. Armstrong's retirement merely secures to him the half-pay of his rank, to be enjoyed together with a civil pension when his period of office at Somerset House expires. The number of inspectors-general is still one above the regulation number, but it is anticipated that Sir David Deas, K.C.B., the senior officer, will shortly accept his retirement, having for the last two years been on half-pay.

A MEDICAL OFFICER OF HEALTH FOR OXFORD.

AT a recent meeting of the Oxford Local Board, Professor Rolleston, as we stated last week, moved the appointment of a medical officer of health for Oxford, during the carrying out of a local drainage scheme, which will bring large numbers of labourers to the place, and will require a period of two or three years for its completion. Dr. Rolleston's speech has been republished in a pamphlet form, and deserves general perusal for its masterly character. The learned professor sets forth the benefits likely to accrue to Oxford from the proposed appointment. He points out that the period of office will be sufficiently long to afford evidence of the good to be effected by the proper discharge of its duties; and that the inhabitants would thus learn by their own local experience how much money and how many lives may be saved by careful supervision of the public health. He cites the past and present conditions of Leicester, of Bristol, and of Merthyr Tydfil, as proofs to the same effect, derived from external sources, and pays a well-merited tribute to the labours and the successes of Drs. Crane, Davies, and Dyke. He further makes the eminently judicious suggestion that the duties of the office should be defined, the remuneration fixed, and the two most eligible candidates selected from among the rest by a committee of five, appointed for the purpose, and consisting of the Mayor, the Vice-Chancellor, and three persons elected one by each of the three sets of persons who make up the board—the representatives of the Council, the representatives of the parishes, and the representatives of the University. We are happy to add that Dr. Rolleston's wisdom and eloquence have proved effectual; and that, after full discussion, his motion has been adopted, and is about to be carried into effect.

DIMENSIONS OF THE RED BLOOD-CORPUSCLES.

DR. MANASSEIN contributes a paper on this subject to the *Centralblatt*, in which he states that there can be no question that any influence producing a great change in any function of the organism must necessarily modify the physical and chemical relations of those corporeal elements on which the activity of the function is dependent. The variations of the size of the cells is one of those physical changes to which, up to the present time, but little attention has been paid. That some change really occurs is highly probable on *a priori* grounds. The more general the change of function by so much the greater the quantity of cells which suffer modifications in different ways, and, amongst other things, in their size. Dr. Manassein has particularly devoted himself to the study of the changes produced in the red blood-corpuscles by exposure to various circumstances producing augmentation or depression of temperature of the body generally. Amongst the causes producing augmentation of the body temperature are septicæmia, exposure of the whole animal to heat, and the immersion of the animal in an atmosphere charged with carbonic acid. All these produce diminution of the size of the red blood-corpuscles in all their dimensions. On the other hand, the respiration of oxygen, exposure of the whole body to cold, the administration of quinine, of cyanic acid, of alcohol, and acute anæmia, all produce enlargement of the blood-corpuscles.

DR. LIVINGSTONE.

DR. LIVINGSTONE is the subject of an animated correspondence which has been going on in the morning journals during the past week or two, and is likely to be protracted till some authentic news comes from the Doctor himself under his own sign-manual. It must suffice, in the meantime, to say that the balance of probabilities, as stated by Captain R. F. Burton and his auxiliaries, is in favour of the Doctor's continued safety and well-being, the conjectures less favourable to him being founded more on theory than on actual experience of Central Africa and its tribes.

In consequence of the hope of communicating with Dr. Livingstone through Mr. Stanley, the American traveller, having had to be abandoned, the Council of the Geographical Society propose to address the Foreign Office with the view of arranging some means of communicating with the interior of Africa. The Council thought that the plan of employing messengers might first be tried, failing which resort might afterwards be had to sending an armed expedition.

TESTIMONIAL TO DR. EDWARD BALLARD

THE custom of presenting testimonials is kept in repute by occasionally being acted on in an obviously proper instance. Such was the case last week, when a number of the medical men of Islington assembled at the hospitable residence of Mr. Clifton to present a testimonial to Dr. Ballard, who has lately resigned the post of medical officer of health in Islington, in consequence of his being appointed an inspector in the Medical Department of the Privy Council. The testimonial consisted of a binocular microscope, with every recent improvement, of the value of £40, made by Ross, and bearing the following inscription: "Presented to Edward Ballard, M.D., by the medical practitioners of Islington, 1871. Ross, London. 3403." The presentation was fitly made by Mr. Harvey, the chairman of the sanitary committee of the vestry, who set forth in very apt and graceful terms the services which Dr. Ballard had rendered for the last fifteen years, not alone to Islington, but to sanitary science, as well as the kind and gentlemanly spirit which

he had always shown towards his professional brethren. Dr. Ballard made a suitable reply, in which he expressed his gratification at such a mark of the approval of his professional brethren.

SEWER AIR AND TYPHOID FEVER.

IT has been frequently urged, as an objection to the connexion alleged to exist between typhoid fever and sewer gases, that nightmen and those whose occupation brings them into relation with sewers, are particularly exempt from fever. A statement of this kind, when once made, gets repeated again and again until it carries the weight of an axiom. We agree, however, with the view expressed by Dr. Murchison in his treatise on Continued Fevers, that a careful consideration of the facts does not justify such a conclusion. Some of the cases of fever included in Parent Du Chatelet's essay on the Diseases of Workmen in the Drains of Paris were almost certainly cases of typhoid fever; and according to Dr. Peacock's experience, enteric fever is not uncommon among the workers in sewers. Dr. Murchison's observations also point to the same conclusion. Of course observations drawn from persons employed in removing rubbish, ashes, and such-like refuse, have no bearing on the subject. Assuming that enteric fever is capable of being generated *de novo* out of indifferent sewage products (which has never been demonstrated), it is not doubted that only under certain conditions—of putrefaction or fermentation, for example—will such products contain the *materies morbi* of typhoid fever. There are, moreover, several facts to be borne in mind as to the conditions under which workers in sewers, &c., are exposed to these gases. They are rarely exposed for long periods at a time, and many of the workers in drains are of an age little susceptible of contracting the fever, from which it appears they, nevertheless, occasionally suffer.

THE DRAINAGE OF TORQUAY.

THE irrepressible question of sewage-disposal is again in the ascendant at Torquay. For a long time it had been a trouble in the potential form, seemingly capable of being to a large extent ignored. It is true that some years ago the local board consulted Mr. Bazalgette on the drainage of the town, and that eminent engineer duly reported on the subject, giving his opinion, we believe, in favour of irrigation. But the matter appears to have dropped, and was only revived last October. Now, however, we are glad to perceive signs of returning activity, and of a determination on the part of the authorities of the town to "go right through" with the sewage question. At a meeting of the local board on Saturday last, Mr. Appleton, submitted a plan he had prepared for utilising the sewage of Torquay by pumping it to Bovey Tracey, a distance of nearly ten miles. The execution of the works necessary for the carrying out of this project would, he estimated, involve an outlay of about £48,000; but the scheme would, he said, yield a net profit of £700 per annum, and put the corporation in possession of an estate of 200 acres in fee at the end of fifty years. A previous proposal contemplated the emptying of the sewage into the sea, considerably to the eastward of Torquay, at a cost of £30,000. We are looking forward to the time when the great truth that the soil is the only proper receptacle for sewage will be universally recognised, and when the clumsy, wasteful, and oftentimes disgusting expedient of draining into the sea will be for ever abandoned. At all events, we trust the decision of the authorities of Torquay on this important matter will be swayed less by considerations of immediate cost than by a far-seeing regard for the permanent interests of that beautiful watering-place.

MEMORIAL TO JENNER.

IT is proposed to place in the church at Berkeley, Jenner's birthplace, a stained-glass window. A beautiful design has been furnished which it would require £500 to execute. The design is taken from St. Luke's Gospel, and represents our Lord in his various acts of healing. It is one of the things we, as a nation, have to be ashamed of, that Jenner has got his principal honours from abroad. Verily, a prophet is not troubled with too much honour at home. Of course nothing could be more fitting than the carrying out of this proposal in Berkeley, and all people that would show a just sense of merit will send a contribution to Henry Kingscote, Esq., 96, Eaton-place, the honorary secretary of this most creditable movement.

FREE LIBRARIES AND INFECTIOUS DISEASE.

A CORRESPONDENT calls attention to an obvious risk in connexion with the extension of the Free Library system—namely, that of communicating infectious diseases,—testifying that he has seen in a room where a patient lay suffering from small-pox a library book which the nurse was reading; and that he had been told of another case where a patient recovering from small-pox was reading a book from a neighbouring library. We would suggest that every person subscribing should sign an undertaking to discontinue the use of books on the occurrence of any infectious disease in his house, and that the breach of this rule should be made an offence in law. We cannot stop the great and beneficial system of public libraries; but we ought to make it as safe as possible.

HOSPITAL SUNDAY IN RICHMOND.

THE hearty appeals made on behalf of the Richmond Infirmary on Hospital Sunday, November 19th, in Richmond and the neighbouring parishes, resulted in a sum of £222 12*s.* 7*d.* being added to the funds of the hospital.

During the present year a valuable legacy of between £6000 and £7000 has been bequeathed to this charity. The first instalment of £2000 has recently been paid over to the treasurers, which will enable the Committee to increase the accommodation for in-patients. We understand that six new beds will be added at the beginning of the year, four of them children's cots.

CHOLERA has declared itself in Nova Scotia. A man labouring under it, having clandestinely landed near Halifax from the steam-ship *Franklin*, now in quarantine at New York, communicated the disease to the inhabitants, three of whom have died, to the intense consternation of the others. According to the Philadelphia correspondent of *The Times*, the malady is believed to have effected a foothold on the American continent, in spite of the strict quarantine maintained along the seaboard of the Canadian dominion and the States.

DR. ALDIS, on behalf of the Hon. Miss Tucket, Miss Disbrowe, and other ladies, has presented to the guardians of St. George's Hanover-square Union a stretcher of an improved construction, understood to be Miss Tucket's own invention. On this stretcher, in case of fracture or injury, a person can be kept in a horizontal position while going up-stairs.

THE new Edinburgh Infirmary is making progress: Messrs. Shaw having completed the necessary excavations in the grounds previously occupied by George Watson's Hospital, and Messrs. Beattie having produced the plans for the building, at least in its central departments.

ON Wednesday, the 13th inst., a large number of the past and present students of St. Mary's Hospital met in the Board-room to present a piece of plate to Dr. Sibson, and a handsome timepiece to Mr. Lane, on their retirement from the respective offices of physician and surgeon, after twenty years of valuable service in the school and hospital. The presentation was made on behalf of the students by Mr. Gascoyen, whose observations, together with the replies of Dr. Sibson and Mr. Lane, were received with warm demonstrations from the large number of students the occasion had brought together.

MR. WILLIAM A. BRAILEY, B.A., M.B., has been elected a Fellow of Downing College, Cambridge. Mr. Brailey took his B.A. degree in 1868, was placed second in the first class of the Natural Sciences Tripos, and was recently appointed resident house-physician to Addenbrooke's Hospital. The fellowship to which Mr. Brailey has been elected is a non-resident one, tenable for twelve years from election, and is not vacated by marriage. These non-resident fellowships are intended for persons in the active pursuit of the studies of law or medicine.

THE *Shipping Gazette* and other mercantile marine journals still contain records of vessels that arrive at home and foreign ports with cases of small-pox on board. So much want of ordinary caution was exhibited at the commencement of the epidemic with respect to cases that occurred, that the disease is not likely to be extinct in our marine for a very long time.

THE foundation-stone of a cottage hospital at Tewkesbury was laid on the 30th ult. by Mr. John Surman, the future president. A cottage has been rented and used as a hospital for the past six years, and the success of the movement has been materially assisted by the practical experience of Dr. Devereux.

AN important document, marked "confidential," in reference to the medical use of alcohol, is going the round of a certain portion of the profession for signature. We refrain from publishing it this week, but shall not fail to notice it at the right time.

MR. H. A. CÆSAR, medical officer of the northern district of Mile-end Old Town, has been voted a gratuity of £25 for extra duties during the small-pox epidemic; and the guardians have further expressed their satisfaction with his services by raising his salary from £200 to £225 per annum.

THE Town Council of Scarborough have appointed a special committee to inquire into the state of the public health. The committee are authorised to call in such professional assistance as they may think necessary, and to take any action which may be deemed urgent.

RETIRED Staff-Surgeons Robert Grahame, M.D., James Vaughan, Charles D. Steel, Charles T. S. Kevern, Andrew Murray, and Joseph Henderson, M.D., have been promoted to the honorary rank of Deputy Inspector-General of Hospitals and Fleets.

DR. J. M. BEVAN, jun., of Northampton, has received, through the Mayor of that town, a vellum testimonial from the Royal Humane Society, for the humanity and courage displayed by him in saving from drowning a lad who had fallen into the canal in July last.

On dit that the draft of the amended Contagious Diseases Act has been drawn up, and is now at the Home Office. The abolition of compulsory inspection is reported to be one of the probable results.

REPORT
OF
The Lancet Sanitary Commission
ON THE
STATE OF SCARBOROUGH.

No. I.*

IT is scarcely possible to conceive a more healthy site for the erection of a town than that on which Scarborough is built. The main portion occupies a promontory sloping on both sides towards the sea. Nor has this great advantage been altogether neglected by the inhabitants. There are few places of equal importance in which the external ventilation of the houses is so good, the streets so wide, and the number of back-to-back houses so small. The Corporation have not been so neglectful of their duties as has been represented by some ill-informed portions of the press; and so far from its being a fact that any considerable portion of the town remains undrained, we are in a position to state most positively that there is not a single street undrained. The town also has a superb supply of water, delivered on the constant system. There is an excellent market hall and a public abattoir in the suburbs, so that slaughtering ought not to be permitted in the town. The corporation have provided an excellent hospital for the isolation of contagious disease. And if Scarborough does not turn out to be free from preventable disease, or to enjoy as high a state of health as other places similarly used as health-resorts, we can have no hesitation whatever in stating that it is owing to defects which ought at once to be removed.

The registration district of Scarborough includes a few outlying townships, containing 2136 inhabitants. In these districts there has been a slight decrease of population during the last ten years. The average annual mortality is 19 per 1000; and the general state of the cottages is such that there ought to be a still further reduction of the death-rate. This district is excluded from all our calculations; and all our remarks will apply to Falsgrave and Scarborough, which may be regarded as a united town.

The number of inhabited houses was, in 1861, 3987; in 1871 they had increased to 5128. The population in 1861 was 18,344, and in 1871, 24,081, giving respectively 4·5 and 4·6 persons to each house. Much has been said of the importance of separating the southern district from the north. Inquiries lead to the belief that it would be impossible and improper to separate one portion of the town from another, and it will be seen that many of the defects which it will be our duty to point out are to be found in both.

Annual Rate of Mortality in Scarborough and Falsgrave.

1861	22·88	1866	24·51
1862	22·94	1867	24·37
1863	26·01	1868	24·16
1864	24·72	1869	25·90
1865	24·17	1870	23·95

Mean of ten years, 24·36.

It is scarcely necessary to enter into any argument to show that the death-rate is excessive. A short comparison with other towns may help to satisfy the local authorities on this point. In 1869 the Town Council of Brighton issued a special report on the subject. Brighton is nearly four times the size of Scarborough. This aggregation is of itself a very considerable defect. Whatever may be said to the contrary, Scarborough is more the resort of pleasure-seekers than of invalids; whilst Brighton is a favourite residence of consumptive patients. The season of Brighton is longer than that of Scarborough. Much has been said of the overcrowding of Scarborough in the summer months, but it may be doubted if it is greater than that of Brighton in the early winter; and Scarborough has the advantage of

the time of year when people live freely in the open air. Now, the mortality of Brighton was at the date in question only 18·2 per thousand, a difference which can be explained on no other supposition than the existence of some special sources of disease in Scarborough. But as an argument that there is room for a diminution of the death-rate, we may remark that in 1869—a date simply taken because it comes to hand in our remarks on Brighton—the death-rate of Swansea was 18·37 per 1000, that of Birkenhead 18·24 per 1000, of Plymouth 18·53, of Gosport, 19·00, and of Portsmouth only 20·04. None of these towns can boast of the sanitary advantages of Scarborough, and it is absurd to maintain that the town is as healthy as it should be. Moreover, an examination of the registrar's books proves that the excess is largely due to zymotic, and therefore preventable disease. There have been epidemics of scarlet fever, measles, and diarrhœa. During the last five years there has only been one quarter without a death from fever. In 1867 the deaths from zymotic disease in the whole district were 70; in 1868, 113; in 1869, 130; in 1870, 157; and during the three quarters of the present year there have been 78. There have been 22 deaths from diphtheria in the last five years. There can be no doubt, therefore, that by judicious improvements the death-rate may be materially reduced.

The *water-supply* of Scarborough is obtained from a natural spring which issues from the oolite on the side of the cliff, about four miles from the town. The appearance of the water is beautifully bright and sparkling. It is pumped into a brick reservoir calculated to hold three million gallons; from this it flows by gravitation to every part of the town. The supply is constant, and whilst the subjoined analyses prove that the water is excellent at the source, they also prove that local sources of contamination exist, to which attention should be drawn. A remarkable confirmation of the exactitude of these analyses was presented in the case of No. 5. The water was taken from a tap supposed at the time to be in direct connexion with the public water-main. But as the analysis was so unfavourable, further inquiries were instituted, on which it appeared that the sample was drawn from a cistern from which the impurity was no doubt obtained. This shows the necessity of doing away with cisterns altogether, except for watercloset service. A confervoid growth is formed in the tubes and reservoirs, and it would seem, from microscopic examination, that no sufficient means are employed to keep it out of the mains. It is probably harmless, but it should be excluded. It is also desirable that the mains in the town should be flushed out from time to time when this is not done in watering the roads.

Analyses of Scarborough Waters.

Names of Water.	Parts in a Million.		Grains in a Gallon.		
	Free Ammonia.	Albuminoid Ammonia.	Residue dry at 212°.	Residue Ignited.	Chlorine.
1. Water at the Source	0·01	0·06	33·6	18·9	2·0
2. „ from Reservoir	0·02	0·10	28·7	17·5	2·2
3. „ „ Workhouse tap	0·01	0·05	—	—	—
4. „ „ Londesborough Lodge	0·14	0·05	35·	21·	2·65
5. „ „ Private tap, South Cliff	0·14	0·07	—	—	—

The Sewers.—During the last twenty years nearly the whole of the faulty brick sewers which then existed have been replaced by modern ones of proper shape. The most densely populated part of the town, beneath the castle, has had the sewerage completed within the last few weeks. There is a faulty sewer on the southern cliff, opposite to Londesborough Lodge. It is old and rotten. During a recent sudden rainfall not less than 1000 bricks were swept away, and it is proposed to reconstruct it forthwith.

All the sewer gradients are very steep, and on the south side they terminate in an intercepting brick sewer, which passes along the foreshore for a distance of 2000 feet, and is filled and emptied by successive tides. Whenever there is a freshet of rain, and this sewer is full of sea-water, the sewage backs up until the pressure is at times so great as to raise a stone weighing upwards of a ton, when the whole bursts out upon the shore. At the northern extremity this sewer also receives the contents of converging sewers from the castle gate and Newborough, and near this point it is necessary to construct strong screw traps in the basements, which can only be opened at low tide. The north side has a separate drainage system; three sewers converge to Peasholm Bridge, where the sewer receives the water of Peasholmbeck, and empties into the sea. Both outlets are beneath the low-water mark, but they are only exposed to the action of the wind about four hours in a month. Both have a flap-valve opening. The southern outlet is sufficiently removed from the shore, but it appears possible that the northern will eventually become a nuisance to bathers in the northern bay. Both sewers receive a considerable quantity of surface water—the south from the Meer, and the north from Peasholmbeck. This no doubt helps to keep them free from deposit. This mode of discharge is objectionable on principle. Great as is the dilution of the sewage in the mass of sea-water, yet the idea of bathing in it is not pleasant. Moreover, it is a pure waste of valuable material, which, by altered arrangements, might easily be utilised. The general principles upon which the sewerage of Scarborough is based is essentially faulty. Steep sewers leading to a tide-locked intercepting sewer, must always lead to dangerous congestions and backing up of sewage at the lower points. These congestions can only be obviated by the construction of intercepting sewers at higher levels. Such sewers would diminish the area of the tide-locked district to its smallest limit, and they would effectually prevent those sudden explosions of sewer gases which must occur whenever there is a sudden fall of rain. Engineers have too often made a great mistake in supposing that rapid gradients are less dangerous than levels. This is not the case, for the most dangerous emanations take place from surfaces alternately wet and dry, and the pressure of the sewer gases is more liable to frequent sudden increase.

The sewers are not sufficiently ventilated. There are in all about nine openings, protected by charcoal screens, said to be changed once a month during the season. Some were not in good working order when inspected.

Nothing is known as to the number of houses properly connected with the sewers, but all new houses are compelled to make connexion. Numerous instances of imperfect house drainage were given us by several observers, not only in the lowest but in the better portions of the town, and cases of diphtheria and typhoid fever were referred to them. In Queen-street we saw an old drain the contents of which had oozed out upon the pavement. It was stopped by the accumulated filth of many years, and it was evident that no new connexion had been made between the house from which it came and the main sewer. In the absence of official records, it is impossible to say how many such cases still remain. The practice of building upon foundations made of street refuse does not extensively prevail at Scarborough, but it has commenced at a place called Nelson's Tip. Here the greater part of a street is built on street sweepings. The drains in this case are liable to open as the soil settles, to the great danger of the inmates. In no part of the town were the house drains in a worse state than on what is called the common. In several successive yards they were found stopped up, and in the very first house visited the woman said that she had lost three children

from fever. It seems an almost universal practice of the architects and builders to bring the drains through the houses underneath the floors. This ought at once to be put a stop to, for it lies at the very foundation of sanitary improvement. The sewer of Londesborough Lodge actually passes underneath the hearth-stone of a house beneath, and it is not surprising that two of the family died from typhoid fever a few years ago.

The intimate connexion between diphtheria and defective drains has been often shown, and several remarkable cases have been confidentially related to us. In one house in which four cases had occurred, it was discovered that the drain had not been properly connected with the sewer, and that the whole drainage had escaped into the soil.

For many years past the drainage of the older parts of Scarborough has been very defective. Now that a public sewer has been made immediate steps should be taken to improve the house drainage, and to keep it carefully supervised.

It appears that, whilst everyone is compelled to submit his plans for the approval of the Local Board, no sufficient means are taken to see that they are properly carried out. This is a most important matter, and should receive the earnest consideration of the Council, for the scamping work of masons and plumbers is too often the cause of very serious disease affecting the interests of the whole community.

TRANSFUSION.

PROFESSOR TH. JÜRGENSON, in the *Berlin. Klin. Wochenshrift*, describes three cases of transfusion of blood, of which two were followed by recovery, and one by transitory improvement.

The first case was one of phosphorus-poisoning. A man, twenty-eight years of age, had taken a solution of the ignition mass of eight bundles of matches. He had icterus on the tenth day, which was accompanied with bleeding from the mucous membrane of the nose and throat. The patient became weaker and fainter; the activity of the heart decreased; and after he had begun again to take food Professor Jürgeson thought first of the transfusion, in order to bring about a compensation for the destruction of cells, and to spur the heart to greater energy. On February 11th (the man had drank the phosphorous mass on Dec. 9th) M. Volkers, by direction of Professor Jürgeson, effected the transfusion of 580 cubic centimetres of blood into a vein of the arm. At the same time about 500 cubic centimetres were taken from the radial artery, whilst during the operation the heart's activity was excited by champagne. The defibrinated blood used had been the moment before taken from three healthy persons. The course of the disease after the transfusion changed for the better quite strikingly and rapidly. The man increased in strength, and was able to leave his bed at the beginning of March. It is an interesting fact that the blood taken from the patient, on investigation, showed not only diffused blood-colouring matters, but was generally relatively about as rich in solid constituents (poor in water), especially in albuminous and extractive products, as the blood of a cholera patient.

The second case was that of a young lady of twenty-two years of age, who had already suffered for a long time from chronic ulcer in the stomach, which perforated, and was followed by circumscribed peritonitis, and this again by pleuritis. On account of great dyspnœa and frequency of the pulse, puncture of the thorax was performed on March 20th, and the fluid exudation drawn off. In consequence of great weakness of the heart, the depletory transfusion of 350 grammes of defibrinated blood was made into a deep-lying vein of the arm. The blood had been previously (the evening before) drawn from five or six healthy people, defibrinised, packed in small well-closed bottles, and kept in a cellar during the night, so that it was used for the experiment fourteen hours after being drawn off. This was necessary because the patient lived in the country several miles from Kiel. The temperature of the body increased, however, after the transfusion to above 40° R. The collapse could only be combated by champagne. In the night the patient was restless, but on the next day she was in a much better condition. On the following days the fever was very high, and the only means of avoiding death seemed to be by drawing away the exuded fluid in the pleura. With this object the patient was brought by steamer to Kiel—a distance of fifteen miles. Symptoms of collapse from weakness of the heart now made their appearance, and seemed to indicate on the 31st of March another transfusion. On this occasion Volkers injected about 175 cubic centimetres of blood into the radial artery, during which the resistance to be overcome appears to have been enormous. The good effects first appeared twenty-two hours later, but on the 1st April a thrombus was formed in the axillary vein and left vena femoralis. On account of the effusion in the pleura having increased, an incision was made in the fifth intercostal space, to get rid of the fluid, and to remove the pressure from the inferior vena cava. The patient died on the following day.

The third case was one of poisoning by carbonic oxide in a man twenty-eight years of age. He was quite unconscious; the breathing ceased at times; his body was affected by clonic spasms. Temperature 39° R., respiration 64, pulse over 200. 400 cub. centimetres of blood were drawn from the median vein, and immediately 375 cub. centimetres of healthy defibrinated blood injected. By special analysis *carbonate of hæmaglobulin* was proved to exist in the blood. After the transfusion he was ordered warm baths with cold douches. Three hours after the operation the patient began to speak. Four days later an extensive gangrene of the skin showed itself on the gluteal regions, the trochanters, and the soles of the feet, and later a large abscess was formed under the skin of the back. Prof. Jürgeson conceives this to have been brought about in this way: that by the action of the carbonic oxide gas and diminution of assimilation of oxygen, so many injurious matters became heaped up in the tissues, that they fell into decay on the slightest provocation. The gangrene of the sole of the foot, however, could hardly be explained on this supposition, for the feet are subjected to no pressure by a quiet position in bed. On the gluteal regions 160 square centimetres of skin were destroyed. But, in spite of everything, the patient recovered, having been kept for a long time in a permanent bath. Prof. Jürgeson comes, after a long theoretical disquisition, to the conclusion that, in poisoning by carbonic oxide, transfusion must come into use, not as the last, but as the first remedy.

THE CHARITY ORGANISATION SOCIETY.

A CONFERENCE was held on Tuesday, December 12th, at the house of the Society of Arts, John-street, Adelphi, to discuss the best means of checking the abuses connected with the out-patient department of hospitals and the dispensary system, with special reference to the expediency of extending the provident principle. The chair was taken by W. H. Smith, Esq., M.P. The meeting was large and influential, including the Right Hon. Mr. Stansfeld, M.P., Dr. Acland, Sir Charles Trevelyan, and the Hon. Arthur Kinnaird, M.P. There was also a large number of medical men present, including Dr. Aldis, Dr. Ford Anderson, Dr. Rogers, Mr. Fairlie Clarke, Mr. H. Nelson Hardy, Dr. Glover, &c. Letters expressive of regret at inability to attend were read from Lord Lichfield, Lord Derby, the Bishop of London, Sir William Fergusson, &c.

Mr. W. H. SMITH, M.P., began by a feeling allusion to the illness of the Prince of Wales. He said the evils connected with the administration of relief in hospitals and dispensaries had been under consideration by many thoughtful people since 1854, when Dr. Guy read a paper on the subject at the Statistical Society; but nothing hitherto had been done. Some means, he said, should be devised for remedying the present pauperising system now in force. All comers were served. He remarked that the position of a person of limited means, but respectable, was very difficult and sad, in regard to the payment of medical bills of £5, or £10, or even £30. A system was wanted by which,

partly at his own cost, the respectable working man would be able to procure good medical advice, and to be attended at his own home without going to a public hospital—a system by which infectious diseases were much spread.

Mr. FAIRLIE CLARKE made an able statement of the grounds upon which the present movement rested. Roughly but carefully he reckoned that a million persons at least—a fourth of the population—received relief annually at hospitals. Moreover, the people were going to hospitals in greater numbers, and at a very increasing rate. In 1830, in eight hospitals, there were 46,000 out-patients; in 1869 in these hospitals there were 277,000 out-patients. In 1870 the attendances were 3000 more than in 1869. Of these large numbers some must be able to pay a doctor, and many must be able to pay a few shillings a year to a provident dispensary. Illustrating the success of the provident dispensaries, he instanced the case of Derby. With a population of 44,000, and a good hospital, there were two provident dispensaries, one established forty years with 4900 members, another only lately established, and yet having a membership of 1100. In London provident dispensaries had not succeeded so well as in manufacturing towns, which Mr. Clarke attributed to the competition of the great hospitals. If the principle were acted on in London as widely as at Derby, there should be 460,000 members instead of 2500, and fully 100 dispensaries instead of 11 or 12, and some of these languishing. He said the Charity Organisation Society suggests the conversion of the present dispensaries into provident dispensaries, and their affiliation to the great hospitals. He pointed out that benefit clubs were inadequate to meet the case, and that at present provident dispensaries could not be fully self-supporting; and ended an admirable statement by saying that this was not a mere doctor's question, nor a philanthropist's question, but a serious question for statesmen.

Sir CHARLES TREVELYAN said that the evil of indiscriminate medical charity extended through the whole of society; that even some who could pay guinea fees went to hospitals. The medical profession was unpaid, and though he honoured the profession for the way in which it did unpaid work, yet unpaid services were not generally good. Sir Charles alluded to the question of special hospitals, and the objection of Sir Benjamin Brodie to them. He was rather severe on "young men in London getting up all sorts of odds and ends of hospitals," instead of allying themselves with good, sensible dispensaries, where they might acquaint themselves with the more important, because more common classes of disease. He condemned the practice of employers of labour subscribing to a hospital on the understanding that their *employés* were to be treated there, as pauperising the men, and unjust to the institutions, which did not really receive the support they seemed to receive. He moved the first resolution:—"That this conference is of opinion that there exists a great and increasing abuse of out-door relief at the various hospitals and dispensaries of the metropolis, which urgently requires a remedy."

Dr. MEADOWS seconded the resolution. He stated that after fourteen years' experience, he was more and more satisfied of the evils of the out-patient system at hospitals, and that the poor were the greatest sufferers, because they were not properly attended to in consequence of the numbers of unfit cases applying. The wives and daughters of persons with £1000 a year sometimes applied. It was unjust to the profession that its members should spend several of the best hours of the day at those institutions, giving advice to those who could afford to pay.

Mr. POWNELL, a magistrate, made some observations which showed that he misunderstood some of the speakers. He argued that the poor had a right to Guy's and Bartholomew's hospitals; which, of course, nobody denied.

Dr. ROGERS warmly denounced the Poor-law system as the great evil—cheap, and, in the estimation of the poor, nasty, and sending them in crowds to the hospitals. He said the promoters of this provident principle were taking people off the scent of the true remedy, which was an amended system of medical relief; instancing the case of Birmingham, as showing that, as the Poor-law medical officers had been reduced, the out-patients of hospitals had increased from 66,000 to 75,000. The general wage in England and Wales, he said, was not more than 12*s.* 6*d.* a week, arguing that that was not a sufficient wage for supporting provident institutions on any scale sufficient for the care of the poor.

Dr. GUY gave his assent to the calculations of Mr. Fairlie Clarke. He thought it was difficult to find out the circumstances of patients coming to hospitals, who, he said, generally speaking, were really ill. He suggested that on the first occasion they should be relieved; on the second required to give a sum, say a shilling; and on the third something more, or a certificate from some competent person of their being necessitous.

Mr. HOLLAND said it was useless to say that we were in this movement taking away from the poor. We were, in fact, leaving the feudal and dependent system for an industrial system. Persons with accidents, such as broken legs, had nothing to do in the matter. They were never treated as out-patients, and would always be admitted under any system.

Dr. ALDIS thought that there could not be a complete conversion of old dispensaries; but there might be a combination of the free and provident principle.

The Hon. ARTHUR KINNAIRD suggested voluntary contributions from the poor, which in a dispensary in Dean-street he was connected with yielded £500.

The first resolution was carried almost unanimously.

Dr. ACLAND said that no one remedy would cure evils so complicated. Under the Local Government Act, which he spoke of as a highly important one, he said the people must learn to govern themselves, for they will not be governed by others. He spoke respectfully of the guardians and of the three or four thousand Poor-law medical men who will have to act under the Local Government Board. He hoped that the county hospitals would not much longer be out of all relation to the Poor Law as at present. He spoke highly of the old Poor Law. He said he once saw a great hospital on the Mississippi which received three classes—those who could not pay, those who could pay a little, and those who could pay well; and thought something like this was wanted. He did not know what to say about the staffs of hospitals being paid. In the great hospitals men were paid by the opportunities of becoming great. He ended a genial and earnest speech by asking with emotion—seeing Mr. Stansfeld present, and alluding to the coincidence of Prince Albert's case and that of the Prince of Wales—if any measure could so redound to a Government's glory as an attempt to make such "senseless accidents" impossible in the houses either of the rich man or the poor man. He moved the second resolution:—"That, in the opinion of this conference, the evils inseparable from the system of gratuitous medical relief administered at the out-door department of hospitals and in free dispensaries can in a great measure be met by the establishment on a large scale of provident dispensaries, not only in the metropolis, but throughout the kingdom, and by improved administration of Poor-law medical relief."

This resolution was ably seconded by the Rev. Mr. KITTO, who insisted that unless the hospitals took up the matter little success would attend attempts to work provident dispensaries; which idea was also pressed by

Mr. H. NELSON BARNES, who complained that great hospitals, by their indiscriminate reception of all out-patients, competed with the provident dispensaries like that of St. Marylebone, with which he was connected. In this dispensary £255 came from members, and only £38 13*s.* 6*d.* from subscriptions.

The Right Hon. Mr. STANSFELD, M.P., expressed his general sympathy with the promoters of the movement, and his wish cordially to co-operate with the Charity Organisation Society. He considered the principle of the Poor Law a very creditable and essentially a charitable one like that of the Society. The Poor Law had to be watched closely and administered carefully, so as first not to do harm, and also to do good. He was struck with Dr. Acland's suggestion about county hospitals. In regard to Dr. Acland's allusion to the subject of typhoid, he could not commit his colleagues or anticipate the action of Parliament, but he ventured to say that he would be disappointed if he did not have an opportunity of bringing forward some proposals in the way of sanitary legislation.

The resolution was carried, and after some further remarks by Mr. SMITH, this successful meeting was brought to a close.

Correspondence.

"Audi alteram partem."

THE INCREASE OF LUNACY.

To the Editor of THE LANCET.

SIR,—I see that in one of the medical annotations in THE LANCET of this week you draw renewed attention to the question of the accommodation of the ever-increasing pauper lunacy of the county of Middlesex. I therefore venture again to claim consideration through your columns for the plan we have of late adopted in the county of Sussex, as it has so far been attended with decided success.

The plan is as follows:—In all asylums there are a certain number of chronic and harmless insane, whose relatives are constantly applying to the authorities for their discharge. Why should not the wishes of these relatives be acceded to? Unfortunately, however, it has become almost a dogma with not only the public generally, but also with the medical officers of asylums, that a pauper, as long as he remains insane, must be detained in the county asylum. I consider this a very pernicious and fallacious doctrine. If the friends of a lunatic are willing to take charge of him, why in the world should they not, always provided that they have the means to keep him from want, and that he is harmless, as many lunatics are, to himself and others.

The visiting justices of the Sussex Asylum have been trying the plan thus shadowed forth for the last eighteen months, and, so far, without any untoward result; indeed, with every prospect of success, for whereas up to 1870 the numbers in the asylum had increased by about 20 a year, during the past year there had been no increase; on the contrary, the numbers now are absolutely smaller than they were last year, and I make no doubt that we shall, by continuing our present plan, be enabled to ward off for many years to come any further enlargement of the fabric of the asylum.

I am aware that the difficulty of initiating such a plan would be very great in Middlesex, and would be attended with even more proportional risk than in an ordinary county; and chiefly for this reason—which is, by the way, another argument against monster asylums,—it is impossible that the medical officers can have a very intimate knowledge either of the patients, the relatives, or their abodes, and therefore they would have great difficulty in selecting proper cases. But in a moderate-sized asylum, like the one for the county of Sussex, the medical superintendent probably knows as much about the patients' friends as he does of the patients, and is thus enabled to judge of their fitness for the charge they solicit.

Two great objections have been urged against my plan.

1. A lunatic hitherto harmless may suddenly become dangerous, and do some mischief either to himself or others. But the likelihood of danger from such a change is not nearly so great as from a sane man suddenly becoming insane. For in the one case you are, or should be, on your guard, but in the other you may have no warning.

2. The relatives of the lunatic may ill-treat or neglect him, and we might have a return to the scenes of a bygone era, when lunatics were loaded with chains and tied up in out-houses. But with the advancing enlightenment of the age, such deeds of darkness become daily more difficult of accomplishment, and if attempted would probably soon be detected and denounced to the authorities.

However, the chance of the occurrence of any such horrors might easily be prevented by retaining the names of the lunatics on the books of the asylum, and either having them visited periodically by an official from the asylum, or else paying the union medical officer a fee for making a quarterly visit, reporting the same to the asylum authorities. There are of course, however, many harmless lunatics in the county asylums whose friends have not the means to take care of them, however anxious they may be to do so. It follows, therefore, that if the visiting justices had the power to order the unions to make a small weekly allowance to these poor people, my plan would be capable of still further development. As it is, more than twenty harmless lunatics have been released, by the wise humanity of the visiting justices, from the county asylum at Hayward's-heath, and could a small pecuniary allowance be granted in deserving cases, several more might be discharged.

I need scarcely take up your valuable space with the many cogent reasons why this plan commends itself to adoption, not the least important of them being the fact that it will prevent the infliction of further pecuniary burdens on the already over-taxed ratepayers.

I am, Sir, your faithful servant,

S. W. D. WILLIAMS, M.D.,
Medical Superintendent, Sussex County Lunatic Asylum.

Hayward's-heath, Dec. 2nd, 1871.

ST. ANDREWS AND MEDICAL DEGREES.

To the Editor of THE LANCET.

SIR,—Allow me space to correct a misapprehension in your last week's article under the above heading.

The inquiry to which you refer is made by the St. Andrews Medical Graduates' Association, not by the University of St. Andrews. Its object is to ascertain on absolute data whether the assurance given to the Scottish Universities' Commissioners as to the sufficiency of ten degrees annually to meet the needs of the profession is trustworthy or untrustworthy; and to determine the exact amount and nature of the injurious action of the present regulations by discovering, as nearly as may be, not the numbers of those who "desire to obtain the degree of doctor," but the number of those who, whilst in the "possession of the qualities which justify its being conferred," are unable to offer themselves for examination by reason of the existing restrictions.

With THE LANCET the Association is of opinion that "it is not desirable that the degree should be procurable except by members of the profession of a certain grade of merit and culture"; but it further contends that the possession of this due amount of merit and culture, tested and proved by a searching examination, should obtain for a candidate his degree, whether he be one of ten or one of twenty.

We are striving for no monopoly, no new privilege, but for restriction by a knowledge-test against restriction by a number-test.

Faithfully yours,

LEONARD W. SEDGWICK, M.D. St. Andrews.

Gloucester-terrace, Hyde-park, Dec. 12, 1871.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

To the Editor of THE LANCET.

SIR,—I shall feel obliged if you will insert the enclosed letter, which I have just received, in your this week's issue.

I am, Sir, yours obediently,

JOHN WICKHAM BARNES,
Honorary Secretary.

Gower-street, Dec. 13th, 1871.

Worcester, Dec. 12th, 1871.

Dear Sir,—I enclose an extra subscription of 5s., payable to Christmas, 1871. I wish that every member would do the same, now that money is wanted for Mr. Corrance's Bill for next session, and an alteration is being made in the time at which subscriptions will become due. Under any circumstances, some odd shillings will have to be paid up to Christmas, and it would be but a graceful act on our part to at once forward 5s. each to enable those who are labouring in our cause and that of the sick poor to continue services which have truly been beyond all praise.

I am, dear Sir, yours faithfully,

WILLIAM WOODWARD, M.D.

To the Secretary of the Poor-law Medical Officers' Association.

DRUNKENNESS AND DIPSOMANIA.

To the Editor of THE LANCET.

SIR,—Upon page 832 of THE LANCET of the 9th instant is what purports to be a report of a meeting of the "St. Andrews Graduates' Association." I trust you will allow me to correct that portion of the report in which my name occurs.

The report says: "Dr. Seaton did not believe in the disease called dipsomania. Drunkenness was a vice, and should be treated as such." I assure you that I never stated anything of the kind. The few observations I made were to the effect that in any attempts which might be made to legislate on the subject of drunkenness it was of the first importance to bear in mind that "habitual drunkenness" and "dipsomania" *were totally distinct*—the one having its origin in vice, the other being the result of disease, and that, consequently, the legislation which might be good for the one would not necessarily be applicable to the other. I therefore urged upon the members, as medical men, the importance of their doing, individually and collectively, everything in their power to guard the general public against the error of confounding "habitual drunkenness" and "dipsomania" with each other.

I am, Sir, your faithful servant,

Hallifard House, Sunbury, Dec. 11th, 1871. JOSEPH SEATON.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

THE election which took place a few days ago at the Royal Infirmary for a physician in the room of Dr. Yose, who has resigned the appointment, resulted in the return of Dr. Glynn. The contest between him and Dr. Dickenson was for some time a very close one. A very active canvass of the trustees had been made by the friends of both parties for some weeks before, and the result was looked forward to with interest. The candidates are both young men. Dr. Glynn has held the office of physician to the Northern Hospital for the last two years; and Dr. Dickenson, the son of a former physician to the infirmary, has until recently been one of the resident physicians of St. George's Hospital.

In compliance with the wish of the profession as expressed at a large meeting of the Medical Society, the authorities of the Northern Hospital have modified considerably the changes which they proposed to make in the laws relating to the appointment of physicians. The alterations they recommend now are: "That no honorary medical officer be eligible to serve on the staff unless he has been engaged in private practice for two years"; and to strike out the words "practises, or within six calendar months shall have practised," and substitute for them the words "from the time of his election shall practise." By the latter clause they secure that their physicians shall practise pure physic. There can be no possible objection to these rules, and when they advertise for two physicians, which they propose doing as soon as these laws have been agreed to, there will be no dearth of candidates. Three at least are at the present time only waiting the announcement of the vacancy to come forward, being prepared to give up general practice if elected.

The mortality of Liverpool is below the average. We have no epidemic decimating the population and making us a by-word to the rest of England; but though this is the case, we have a mortality from lung affections which is deplorable in its magnitude, and is well worthy of being inquired into. At this season of the year it comes as it were to the front, and makes itself noticed. In the week ending Nov. 25th, of 300 deaths recorded here, upwards of 120 were from tubercular and lung diseases. The increase of phthisis is particularly noticeable, because this has gone on steadily advancing for the last five years, whereas previous to that time it seemed on the decline. On the causes of Liverpool's high mortality, one of your medical contemporaries contains a learned disquisition from one of its contributors which has been much laughed at here. It soars so much above what is practical and to the point. What we want is a check put in some way to the intemperance of the present day. If any one thing could be pointed to as the "*fons et origo malis*," to quote the words of the writer alluded to, it is this—the excess to which the drinking of all kinds of intoxicating liquors is carried at the present time. If the legislation of the coming session results in any enactment which will limit and lessen this, it will far exceed, in the absolute good attained, any measure which has preceded it.

Liverpool, Dec. 7th, 1871.

Obituary.

SIR JAMES MURRAY, KNIGHT.

THIS gentleman, whose name has been well known for the last thirty years in connexion with the fluid magnesia which he introduced, was formerly in the army, having become a licentiate of the Royal College of Surgeons of Edinburgh in 1807, and of the Dublin College in 1808. He did not take his degree of M.D. of Edinburgh until 1829, and three years afterwards received the honorary M.D. of Dublin. Having settled in Dublin, Sir James Murray was appointed physician to the Lord Lieutenant, from whom he received the honour of knighthood. Sir James seems to have early turned his attention to the employment of magnesia, and, in 1817, wrote a paper "on the danger of using solid magnesia, and on its great value in a fluid state for internal use." He established a manufacture of the fluid magnesia, and was not unfrequently in legal collision with a well-known firm of London chemists for infringement of his patent rights. It must always be regretted, we think, when professional men embark in medical commercial speculations, and Sir James Murray was no exception to the rule that medical men are usually not good men of business. Among his inventions was a method of utilising the principle of atmospheric pressure in the administration of air-baths of any required density or rarity. He held the post of Inspector of Anatomical Schools in Ireland for many years, and only resigned the appointment a few months since: he was also physician to the Netterville Hospital. Sir James Murray published a work on "Heat and Humidity," a treatise on the "Medical Effects of Atmospheric Pressure," and a work on "Cholera," which latter was translated into Italian, besides numerous pamphlets on medical and scientific subjects. Sir James died on the 8th inst., aged eighty-four years.

PHILIP CHILWELL DELAGARDE, F.R.C.S., EXETER.

MR. DELAGARDE was born in 1797, and was educated at the Exeter Grammar School. He was apprenticed to Messrs. Peppin and Barnes, who were surgeons to the Devon and Exeter Hospital, and he thus early had the advantages of hospital training. He afterwards studied at St. Bartholomew's, where he became in due course one of the house-surgeons. He obtained his diploma as Member of the College of Surgeons in August, 1819. In the following year Mr. Delagarde embarked in practice in Exeter, where he lived a highly respected life for over fifty years. He early took up the practice of ophthalmic surgery, and in 1836 became one of the surgeons to the Eye Infirmary. In 1841, he succeeded Mr. Luscombe as one of the surgeons to the Devon and Exeter Hospital, and in 1843 was elected an Honorary Fellow of the College of Surgeons, being at his death within five-and-twenty of the top of the list. Mr. Delagarde died at Exeter on November 17th. He leaves two daughters, his son, who had shown great promise as a surgeon, having preceded him at an early age.

Mr. Delagarde was an excellent practical surgeon, and took much interest in the progress of surgery, and especially that of ophthalmic surgery. Early in life he wrote upon Cataract, and he contributed "A case of Simultaneous Occurrence of Small-pox and Measles" to one of the early volumes of the Medico-Chirurgical Transactions. During the last few years he made several valuable contributions from his practice at the Devon and Exeter Hospital to the St. Bartholomew's Hospital Reports, and also published a pamphlet on "Nursing Sisterhoods," in which he made some trenchant remarks upon the rules laid down for the nurses by the authorities of one of these institutions. In early life Mr. Delagarde had taken an active part in the politics of his city, and served both the offices of sheriff and mayor. He was a good speaker, but was rather apt to allow his feelings to run away with him. In 1865 he presided at the annual dinner of the Fellows of the College of Surgeons, but did not take any active part in professional politics. Respected and beloved by his fellow-townsmen, he leaves behind him a name which will long be regarded with affectionate regret.

ARTHUR KEMPE, F.R.C.S.,
EXETER.

IN Arthur Kempe, the city of Exeter has lost, not only a skilful surgeon, but a citizen of note and a public benefactor. In 1839 Mr. Kempe made Exeter his home, and by laborious habits, a kindly manner, and a sincere love of his profession, deservedly gained the esteem and confidence of an extensive *clientèle* both in Exeter and the county of Devon. In the course of his career he filled several public appointments, the surgeoncies of the Exeter Infirmary and the Devon and Exeter Hospital among others, and showed himself to be a man of skilful hand and excellent judgment. But though his intercourse with his patients was always distinguished by kindness and sympathy, his large-heartedness sought other channels than those afforded by the practice of his profession. Not only did he for years exercise a valuable influence as one of the guardians of the poor, but, having no family claims, his benevolence took a very solid form. A beautiful chapel attached to the Devon and Exeter Hospital, and built at his sole expense, is only one example of the public benefits it was in his mind to confer. An offer to erect, in connexion with the hospital to which he was surgeon, a sanatorium capable of accommodating thirty convalescents, was declined, because fears were entertained as to the possibility of providing the funds necessary for its maintenance; and, only a few days before his death, he proposed to erect for the public benefit a drinking fountain which should be surmounted by an illuminated clock. Since the close of last year his health had shown signs of decay, and he had been obliged to withdraw from the active pursuit of his profession, and though he derived some benefit from change of air and scene, which he sought first in Italy and then in retirement in this country, he died somewhat suddenly at his residence in Exeter on the 25th ult., at the age of 58.

PIERRE CHALVET.

ONE of the most distinguished Vice-Professors of the Faculty of Paris, Pierre Chalvet, has lately passed away. Hard work, and the harassing and all-absorbing labour of fifteen years' brain-training in view of hospital and Faculty *concours*, had told severely upon his health, when the hardships and suspense of the siege of Paris acted as a finishing stroke; so that when, after the recent events, Pierre Chalvet went down to the South of France in expectation of some change for the better, the disease had so far progressed that all his friends but too surely foresaw the melancholy event which has just happened. The untimely end of Chalvet is one more example of gifted young physicians in Paris, with feeble health, breaking down under the all-absorbing work and anxiety of *concours* for hospital and school appointments. Chalvet was one of the most indefatigable workers among the newly-promoted agrégé-professors of the Faculty. His favourite researches included questions of medical chemistry and hygiene. He had already lectured with great success on various topics connected with these subjects, and published several essays relating thereto, and there is no doubt, judging from the results which he had already shown, and from the powerful and original qualities of his intellect, that he would have risen to the very highest rank in the special branch of knowledge which he chose and loved to cultivate. He was beloved and esteemed by all who knew him. Even his adversaries at the various *concours* acknowledged his superiority as a talented and erudite physician, and the uprightness, honesty, and benevolence of his character.

PROFESSOR SPOONER.

IT is with regret that we announce the death of Professor Spooner, who for many years occupied the most prominent position in the veterinary profession.

Professor Spooner entered the Royal Veterinary College as a student in the year 1828, and after attending the then limited course of study in that institution, obtained the diploma entitling him to practise as a veterinary surgeon. He afterwards established classes for private instruction outside the College walls, and conducted them with great success for about nine years. During a part of this period he held the post of veterinary surgeon to the Zoological Society. The first collegiate appointment he received was that of demonstrator of anatomy to the Royal Veterinary College, and after passing through the grades of deputy-professor and professor, he ultimately rose to the position of principal. This last office he held for eighteen years, and until he died of disease of the heart on the 24th inst. Professor Spooner was a most eloquent lecturer as well as a clear expositor of veterinary science, and to him a large proportion of the present generation of veterinary surgeons are indebted for much of their professional education. As a witness in cases of veterinary jurisprudence, few, if any, could equal him; and, from his great and varied experience, his testimony and opinion were highly valued by judge, jury, and client.

Professor Spooner became president of the Royal College of Veterinary Surgeons in 1858; he was also a member of council, and an ex-officio member of the Board of Examiners. By many his loss will be keenly felt, for they will be deprived of a sound professional adviser and a staunch friend.

GEORGE BULLEN, F.R.C.S.,
IPSWICH.

WE have to record the death of this amiable and accomplished practitioner, which took place on Saturday, the 11th ult. Mr. Bullen was a pupil of the late Mr. Stebbing, of Ipswich, obtained his diplomas in 1813, and soon after commenced practice at Ipswich. He was for many years surgeon to the East Suffolk Hospital, operated for stone more than fifty times with very great success, and had a very good collection of calculi, which are now in the museum of the College of Surgeons. Mr. Bullen was very much respected in the town in which he practised. He was particularly conversant with general literature, was always well up to the practice of the day, and possessed an earnestness of manner and a fixity of purpose that gained confidence and won universal esteem. His loss will be greatly felt in Ipswich and its neighbourhood.

DR. J. DAVIDSON.

IT is our melancholy task to have to record this week the death, from typhoid fever, of Dr. J. Davidson, aged twenty-three, one of the resident physician's assistants to the Middlesex Hospital. The disease was contracted whilst in the active discharge of his duties, and after four weeks' illness in the hospital he died on Tuesday, December 5th. Dr. Davidson graduated in Aberdeen in 1870, and took the highest honours in both medicine and surgery. He then went to Vienna, where he studied for some months. In October, 1870, he was elected house-surgeon to the Middlesex Hospital, and at the termination of his year of office he was appointed one of the resident physician's assistants. His period of hospital service was distinguished by zeal, intelligence, and activity; and his amiable temper made him a favourite alike with his colleagues, the nurses, and his patients. Professionally, he was a young man of great promise, and, had he been spared, would probably have taken a leading position.

Sad as it always is to see a young man die in his vigour, yet the friends and relatives of Dr. Davidson have the comfort of knowing that his life was marked by extreme rectitude, industry, and simplicity. His fellow-students, whilst they mourn his loss, may each strive to follow the example of one who so well performed his duty, and did so much to make himself endeared to all.

STAFF-SURGEON THOMAS BARRY, H.M. ARMY.

THIS officer, who was educated in Ireland and afterwards became a pupil of St. George's Medical School, entered the army medical service in 1855, and was promoted staff-surgeon in 1869. He was attacked by jaundice about two months since when on sick leave, and this was followed by an attack of pneumonia, to which he succumbed on November 21st last. The deceased officer possessed the Crimean, Indian, and New Zealand medals for service in those campaigns. All who knew Mr. Barry valued him as a medical adviser and warm-hearted man.

THE COLLEGE OF SURGEONS.

AT a Council meeting on Thursday, the 14th inst., the reports of the Examiners in Dental Surgery, and of a committee appointed to inquire into charges made against Mr. Washington Evans, a Member of the College, were received and adopted.

Mr. Charles Hawkins brought forward a motion for placing the successful candidates for the Fellowship in classes, but after discussion the motion was not adopted.

Mr. Gay called attention to the large proportion of rejected candidates at the preliminary examinations, and after a discussion of his notice of motion for inquiry into its causes, it was agreed, on a proposition by Mr. Simon, that the subject should be referred to a committee that had been already appointed to investigate the subject of the preliminary examinations.

Mr. Erichsen moved that vacancies in the offices of professor and lecturer to the College be advertised before the elections.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members, having passed the required examinations for the Fellowship on the 22nd, 23rd, and 24th ult., were, at a meeting of the Council held on the 14th inst., duly admitted Fellows of the College:—

Butlin, Henry Trentham, L.R.C.P. Lond., Camborne, Cornwall; diploma of Membership dated Nov. 1867.
Hardwicke, Junius, L.K.Q.C.P. Irel., Rotherham, Yorks; June, 1844.
Higgens, Charles, L.R.C.P. Lond., L.S.A., Hambledon, Hants; April, 1868.
Oldham, Chas. James, L.R.C.P. Lond., Norfolk-sq., Brighton; Jan. 1870.
Page, Herbert William, M.B. Cantab., Carlisle; Nov. 1869.
Partridge, Samuel Bowen, L.S.A., Bengal Medical Service; Aug. 1851.
Rendle, Richard, L.S.A., Forest-hill; April, 1868.
Wyman, William Sanderson, M.D. St. And., L.S.A., Upper Richmond-road, Putney; April, 1862.

Four other candidates were examined, but failed to satisfy the Court of Examiners, and were referred for a period of twelve months' further professional study.

At a meeting of the Board of Examiners on the 12th inst., the following Member of the College passed the required examination and obtained the diploma in Dental Surgery:—

Cartwright, Samuel Hamilton, New Burlington-street.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Dec. 7th:—

Kilner, Walter John, Bury St. Edmunds.

On the same day the following gentlemen passed their first professional examination:—

Nicholas C. Collier, King's College; John Ellis Edwards, Guy's Hosp.

UNIVERSITY OF DUBLIN.—The following degrees were conferred at a meeting of the University held last week:—

BACHELOR OF MEDICINE.—Jacob Robertson Headlam O'Connor, John Godfrey Rogers, David Kennedy, Thomas Drapes, Patrick John Molony, Thomas Blair Worthington, William Mark Whittaker, Richard Henry Quill, Henry John Tweedy, Maurice Blunden, Thomas Hamilton Moorehead, James Armstrong, Henry Comyn, Andr. Francis Dobson, Richard White, George Gibson, Thomas W. Browne, Christopher Elliott, Otway Peter Browne, John Waugh.

MASTER IN SURGERY.—Patrick John Molony, John Godfrey Rogers, Jas. Armstrong, Richard Henry Quill, Thomas Blair Worthington, Edward Mariere Courtenay, Francis Geo. Mayberry, John Waugh, Otway Peter Browne, Henry Comyn.

AT a meeting of the Waterford Town Council last week, Dr. J. W. Scott was unanimously elected mayor of that place for 1872.

DR. MORRIS and Messrs. Blackburn and Stawman, medical officers of the Barnsley Union, and Mr. E. M. Owens, of East Farleigh, Kent, have received gratuities from the Government for the efficient manner in which they have discharged their duties as public vaccinators.

PRESENTATION.—On Friday, the 24th ult., a large number of friends and patients of Dugald Campbell, Esq., J.P., surgeon, Lochgilphead, Argyllshire, N.B., entertained him at a dinner and presented him with a valuable timepiece and a purse of sovereigns, on the completion of his fiftieth year of practice in the locality, and as a mark of esteem and respect for his universal kindness and skill. At the same time Mrs. Campbell was presented with a massive silver salver and bread-basket, which bore appropriate inscriptions.

SURGICAL SOCIETY OF IRELAND.—The following gentlemen have been appointed office-bearers for the ensuing year:—President: James H. Wharton. Vice-President: Frederick Kirkpatrick. Council: William Hargrave, Charles Benson, Christopher Fleming, M. H. Stapleton, William Jameson, Richard G. H. Butcher, Joliffe Tufnell, Hans Irvine, Robert Adams, George H. Porter, Thomas Byrne, Philip Bevan, B. Wills Richardson, Rawdon Macnamara, James S. Hughes, Edward D. Mapother, William Colles, E. Hamilton, Humphrey Muichin, Archibald H. Jacob, and Henry G. Croby. Honorary Secretaries: B. W. Richardson and Charles Benson.

Medical Appointments.

ALLCHIN, W. H., M.B., has been appointed Medical Registrar at the Westminster Hospital.

BENTLEY, A. J. M., M.B., C.M., M.R.C.S.E., has been appointed a Resident Physician to the University Clinical Wards of the Royal Infirmary, Edinburgh.

BISHOP, J., M.B., L.R.C.P.Ed., has been appointed a Resident Physician to the Royal Infirmary, Edinburgh.

BRAITHWAITE, J., M.D., M.R.C.S.E., has been appointed Assistant-Surgeon to the Leeds Hospital for Women and Children, vice Wm. Hall, M.R.C.S.E., L.M., resigned.

BRUCE, J., M.B., has been appointed Parochial Surgeon, Public Vaccinator, and Health Officer for the Parishes of Birkwall and St. Ola, vice P. Flett, L.R.C.S.Ed., deceased.

CANTON, G. A., M.R.C.S.E., has been appointed Surgeon-Dentist to the Royal Portsmouth, Portsea, and Gosport Hospital.

CARTER, A. H., M.B., M.R.C.S.E., has been appointed Physician's Assistant, Medical Registrar, and Pathologist to the South Staffordshire General Hospital, Wolverhampton, vice A. Bottle, M.D., L.R.C.P.L., M.R.C.S.E. resigned.

CHELY, R. W., M.R.C.S.E., has been elected Medical Officer for the Workhouse and Infirmary of the Wandsworth and Clapham Union, vice F. D Smith, L.R.C.P.Ed., L.R.C.S.Ed., resigned.

DE MÉRIC, H. E., M.R.C.S.E., has been appointed Junior House-Surgeon to the Royal Free Hospital.

DOBSON, N. C., F.R.C.S.E., has been appointed a Surgeon to the General Hospital, Bristol, vice Marshall, resigned.

ELLIOTT, A. B., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Surgeon to the Farringdon Dispensary, Bartlett's-buildings, Holborn, vice H. Lyne, L.R.C.P.Ed., M.R.C.S.E., resigned.

FAIRBANK, J., M.R.C.S.E., has been appointed Surgeon-Dentist to Charing-cross Hospital, vice G. A. Canton, M.R.C.S.E., resigned.

GILMOUR, R., M.R.C.S.E., has been appointed Medical Officer for the Landport District of the Portsea Island Union, vice J. P. Way, M.R.C.S.E., resigned.

GLYNN, T. B., M.B., M.R.C.P.L., has been appointed a Physician to the Liverpool Royal Infirmary, vice Voss, resigned.

HAMILTON, A., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for District No. 10 of the Ashton-under-Lyne Union, vice F. Cooke, M.R.C.S.E., deceased.

HAMMOND, E. B., M.R.C.S.E., has been elected Medical Officer and Public Vaccinator for the Claydon District of the Bosmere and Claydon Union, Suffolk, vice H. O. Rowland, M.R.C.S.E., L.M., deceased.

LAW, W. T., M.R.C.S.E., has been appointed a Resident Physician to the Royal Infirmary, Edinburgh.

LIVESAY, W., M.B., C.M., has been appointed a Resident Physician to the Royal Infirmary, Edinburgh.

LINDSAY, J. M., M.D., L.R.C.S.Ed., has been appointed Physician-Superintendent of the Derbyshire Lunatic Asylum, Mickleover, vice J. Hitchman, M.D., F.R.C.P.L., F.R.C.S.E., resigned.

LOVE, A. E. B., M.R.C.S.E., has been appointed Medical Registrar to the Evelina Hospital for Sick Children, vice Duke, resigned.

M'CORMACK, M. J., M.B., M.R.C.S.E., has been appointed Medical Officer of Health for Lambeth, vice G. Puckle, M.D., M.R.C.S.E., resigned.

MARSHALL, H., M.D., F.R.C.S.Ed., has been appointed a Consulting Surgeon to the General Hospital, Bristol, on resigning as Surgeon.

MARTIN, H. C., M.B., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

MONDELET, W. H., M.D., has been appointed House-Surgeon to the Victoria Hospital for Sick Children, Chelsea, vice W. A. Parker, M.R.C.S.E., resigned.

PERKINS, H. A., M.B., C.M., has been appointed a Resident Physician to the University Clinical Wards of the Royal Infirmary, Edinburgh.

ROBERTS, W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer to the Coed-Talon Colliery Company, Nerquis Coal and Cannel Company, Leeswood-green Cannel Company, Leeswood Main Coal and Cannel Company, Coppa Colliery, South Buckley Colliery, and several Oil Works and Clubs, vice E. Platt, L.R.C.P.Ed., M.R.C.S.E., deceased.

RUTHERFORD, T., M.B., C.M., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

SHIPMAN, G. W., L.R.C.P.L., M.R.C.S.E., has been elected Medical Officer and Public Vaccinator for the Grantham District of the Grantham Union, Lincolnshire, vice Charles Ferneley, L.R.C.P.Ed., M.R.C.S.E., resigned.

SLATER, J. S., M.R.C.S.E., has been appointed House-Physician to St. Thomas's Hospital, vice E. Cox, resigned.

TAYLOR, D. T., M.B., C.M., M.A., has been appointed Resident Medical Officer to the Small-pox, Fever, and Lock Wards of the Royal Infirmary, Edinburgh.

THORNTON, J. K., M.B., C.M., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

VOSS, J. R. W., M.D., F.R.C.P.L., has been appointed Consulting Physician to the Liverpool Royal Infirmary, on resigning as Physician.

WORFF, Mr. E. P., Dispenser of the Evelina Hospital, has been appointed Head Dispenser of St. Thomas's Hospital.

Births, Marriages, and Deaths.

BIRTHS.

DUKES.—On the 28th ult., at Rugby, the wife of Clement Dukes, M.B., B.Sc., of a daughter.

ENNALS.—On the 17th inst., at Littleport, Isle of Ely, the wife of C. T. Ennals, M.R.C.S.E., of a son.

JONES.—On the 6th inst., at Grange House, Bromley, Kent, the wife of A. O. Jones, M.D., of a son.

MOORHEAD.—On the 4th inst., at Clifton, the wife of T. Moorhead, M.D., of a daughter.

TEALE.—On the 7th inst., at Belvoir-terrace, Scarborough, the wife of John W. Teale, M.A., F.R.C.S., of a son.

MARRIAGES.

HIGGS—LOWTHER.—On the 11th inst., at Harston, Leicestershire, Frederick S. Higgs, M.B., Surgeon, of Heighington, Lincoln, to Lucy Lowther.

WOODCOCK—BOOTH.—On the 22nd ult., at the Parish Church, Cheadle, Cheshire, Samuel Woodcock, L.R.C.P., to Ada, only daughter of Thos. Booth, Esq., all of Manchester.

DEATHS.

BARNES.—On the 9th inst., at Reading (while on a visit), Mary, the wife of M. J. Wickham Barnes, sen., Surgeon, late of Bath.

COWARD.—On the 13th inst., of croup, at Turner's-road, Limehouse, Percy Christopher, the eldest child of Christopher T. Coward, L.F.P. & S. Glas., aged 6 years and a half.

DUKES.—On the 12th inst., at Rugby, Alice Mary, the wife of Clement Dukes, M.B., B.Sc., aged 21.

RAINES.—On the 13th inst., suddenly, at Clarence House, Hull (the residence of his brother-in-law, E. C. C. Hart, Esq.), Charles Raines, M.R.C.S.E., aged 21.

WILLIAMS.—On the 8th inst., at Sudbury, Suffolk, Caroline Anne, the wife of John Williams, M.D., aged 31.

Medical Diary of the Week.

Monday, Dec. 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8 P.M. Mr. Thos. Bryant will exhibit some Drawings and make some remarks, illustrating the process of Cell-growth in the Operation of Skin-grafting.—Dr. Ogle (of Derby): "Preventive Medicine or Medical Reform, not Parliamentary, but particular and individual."

Tuesday, Dec. 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8 P.M. The following Specimens will be exhibited:—Ulcer of Eyelid; Ulceration of Trachea; Large Salivary Calculus removed by Operation; Caseous Degenerative Disease of Supra-renal Capsules; Plugging of Middle Cerebral Artery; Hæmatoma of Muscle; Casts from the Intestine; &c. &c.

Wednesday, Dec. 20.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL.—Operations, 2 P.M.

Thursday, Dec. 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.

Friday, Dec. 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—8 P.M.

Saturday, Dec. 23.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

SOME REMARKS ON JOINT DISEASE.

MR. BICKERSTETH, in his late address on the Recent Progress in Surgery, when speaking of joint disease, says that no remedy inspires him with more confidence than does the actual cautery in proper cases of such disease. It relieves with the certainty of a specific the pain, and, by derivative influence, promotes a curative effect. If suppuration has not taken place, if followed by absolute rest it almost invariably cures. Alluding to those annoying and difficult cases of joint affection occasionally following sprains and fractures in the neighbourhood of joints, which so often fall into the hands of bone-setters, Mr. Bickersteth declares that the phenomena are to be explained by the rupture of some adventitious membranous structure, either within or immediately external to the joint; and that such changes and adhesions from within the joint, not only in consequence of mechanical injury and of idiopathic inflammation, but also from the long-continued maintenance of absolute rest of the part, he has had an opportunity of frequently demonstrating in the dissecting-room. For years past Mr. Bickersteth says he has never allowed a patient who has been under his care for Pott's or Collis's fracture to be discharged from hospital without subjecting him to very free manipulations of the neighbouring joints, and he has heard much less of the "small bones" and joints being "out" since he adopted this practice. We are somewhat surprised that Mr. Bickersteth has made no allusion to the interesting series of papers that appeared in THE LANCET from the pen of Dr. Wharton Hood.

Iris.—Inquire of Dr. John Bright, Hon. Sec. and Librarian of the Sydenham District Medical Society, which, if we remember rightly, framed a list of suitable charges not long ago. Dr. de Styrap, of Shrewsbury, might be applied to for the charges in that town.

Medicus.—In the summer months there are courses of operative surgery at several of the London schools. Mr. Johnson Smith, of the Greenwich Hospital, might assist our correspondent.

H. E. B. had better consult some respectable medical practitioner.

BLIND FISH.

To the Editor of THE LANCET.

SIR,—A short time ago I enjoyed the privilege of inspecting an anatomical preparation of a specimen of the blind fish from the Mammoth Cave of Kentucky, prepared by Dr. Barker and Dr. Mapother, and now exhibited in the museum of the College of Surgeons, Dublin. It is unnecessary for me to assure you of the great interest felt by anatomists and physiologists in all circumstances relating to these remarkable fish, and of the desire generally entertained to know more of their habits, and the changes produced in their organs by the total absence of light. The results of the investigations of Dr. Barker and Dr. Mapother have not been published; but I feel sure that even a short account of them would be most acceptable to many of the readers of your journal.

The preparation to which I have alluded has evidently been made with the greatest care. The analogy between the life of the blind fish and that of the common mole would lead to the supposition that similar changes would be observed in their organs of sight, and it would naturally occur to those who had made one the subject of investigation to pursue the inquiry in the case of the other. Professor Agassiz has already pointed out the varied and interesting nature of such an inquiry, and has encouraged in forcible language the anatomists of his adopted country to undertake it. In a short communication on the condition of the different parts of the eye in the common mole, to which you made a favourable allusion in your journal a few months ago, I endeavoured to explain the reason of certain discrepancies which existed between the opinions of distinguished anatomists on the simple question whether or not the mole is in possession of the sense of sight. A doctrine has prevailed for some time, indeed ever since it was first promulgated by that accomplished German anatomist, Zinn, which has repressed free inquiry into that question. It is this: that an optic nerve is not necessary for the possession of sight; that a branch of the fifth pair of nerves supplies the eye of the mole, and that we have there the evidence of a new fact, and the proof of a new principle. It is important that such an erroneous theory, arising from incorrect observation, should be at once set aside by those who are anxious to pursue a really difficult investigation; for it is enough to contend with the tenacity with which nature seems to retain her secrets without the additional burden of misguiding information. It certainly would be a most extraordinary fact if it could be proved that the nerves of one special sense were capable of receiving the impressions to which the nerves of another sense are believed alone to be sensitive. For example, that the waves of light might produce a distinct sensation on the auditory nerve, or the waves of sound on the gustatory. That such may be possible is one thing, but that the eye of the mole proves it to be so may be most unhesitatingly denied. The absence or deficiency of one sense is usually compensated for by corresponding increase in the perfection of one or many of the other senses.

> Dark night that from the eye his function takes,
> The ear more quick of apprehension makes;
> Wherein it doth impair the seeing sense,
> It pays the hearing double recompense.

If you will allow me, I will conclude this letter with the expression of the hope that those anatomists who, like Dr. Barker and Dr. Mapother, have bestowed time and care on the interesting question we have discussed, will not be deterred from communicating the results of their inquiries from any fear that they will be opposed by such a theory as that I have alluded to.

I am, Sir, faithfully yours,

December, 1871. R. J. LEE.

AN INSTRUMENT FOR MICRO-RULING ON GLASS AND STEEL.

An ingenious instrument for this purpose has been constructed by Mr. J. F. Stanistreet, the details of which, together with an explanatory plate, are given in the *Monthly Microscopical Journal*. The machine is constructed for ruling lines from the 1000th to the 10,000th of an inch apart; and Mr. Stanistreet has added to it the means of further subdivision to the 100,000th of an inch, but he finds a difficulty in procuring any diamond fine enough for ruling distinctly more than about 5000 lines per inch. It speaks highly for Mr. Stanistreet's mechanical ingenuity that, with the exception of one little steel pinion, he has constructed the entire instrument with his own hands.

D. I. H., (Bath.)—If the insanitary condition of the place be such as to warrant our correspondent in bringing the subject before the medical officer of Her Majesty's Privy Council, it is probable that a Government inspector might be sent down to inspect. We have every reason to hope that in future years a systematic sanitary supervision will be exercised over different districts by properly qualified Government inspectors.

Mr. Wm. Garbutt.—We see nothing unreasonable or unusual in advertising the names of the medical visitors of an asylum, especially where the superintendent is not a medical man.

T. D. O'C. (Peckham) will find that his opinion is in opposition to facts.

THE CAPRICE OF SCARLET FEVER.

To the Editor of THE LANCET.

SIR,—It is somewhat humiliating reluctantly to concur in the opinion that the contagion of scarlet fever has hitherto baffled the subtlest analysis, and defied the most scrupulous precaution, although no disease has received a larger share of laborious attention, or been studied with greater care. Numbering more deaths than cholera, returning again and again to the same localities, often to the same families, it never leaves our shores, and appears, according to certain opinions, totally uninfluenced by sanitary improvements. Questioning any patient, one gives a sigh of relief to hear no history of rheumatic or scarlet fever. At the present time a child is under treatment for general dropsy, coming on insidiously, and only accounted for by the fact that his mother, after a good easy labour, when the medical man was about to leave the house, died suddenly in convulsions. Last year a young married lady, whose previous labours had been instramental, and associated with uræmic convulsions, died of malignant scarlet fever in six days, without any key of explanation beyond the bad condition of the water supplied to the house. The disease did not spread; her young infant at the breast unaffected—a condition of frequent occurrence. But although a whole family may be stricken, the sucking infant alone excepted, permanent immunity is not conferred. When a woman has married twice, the children of one husband only may be susceptible; one child only out of a number will be attacked; perhaps the next year the remainder. A family will carry the poison about with them for an indefinite period to various places, or, leaving their own home for a while, enjoy good health; but immediately on return, regardless of disinfectants, the fever will blaze out afresh. All the children in one semi-detached cottage will be stricken; their playmates next door spared. Young girls menstruating late as well as barren wives appear susceptible. Pregnancy affords certain exemption; the period of lactation one of extreme danger; yet a sucking infant will contract disease elsewhere without communicating the same to the mother, which leads one to consider second attacks rare and frequently spurious. In 1863, a gentleman over sixty, living near Buckingham Palace, giving a ball to 100 people, one middle-aged guest, a wall-flower, apologised for coming as he had scarlet fever at home. Politely making light of the matter, the host and he, watching the dancers, conversed together in the heated rooms; unfortunately the former, and subsequently his only daughter, contracted the disease. Last year at Woolwich the majority of the cases originated in the Army Service Barracks, formerly the military hospital, built in 1780 and enlarged in 1806. Writing this letter almost entirely from personal experience, instances of typhus conveyed in a box of clothes from Charlton to Woolwich and St. John's-wood have been met with, as well as scarlatina in a footman's coat; yet bachelor medical men seldom appear to spread disease, although married practitioners in their clothes carry infection to their families, also sometimes to patients. Occasionally it will be unavoidable to rush from malignant scarlet fever to parturition; but adopting the precaution of either walking or riding, in preference to sitting in a close carriage, will confer immunity without changing one's clothes. But no medical man should perform post-mortem examinations whilst attending midwifery cases. A woman states that at Aldershot in 1864, when doubled up with four families in one room, she contracted the fever from her husband, who died after three days' sickness. Another, permanently deaf, stated that three months after delivery of her fourth child, and when thirty-six years old, she caught disease from one of her own children. Another during a Canadian winter, when nineteen years of age, and about the period of her second quickening, contracting scarlatina, was ill a month: desquamation complete; throat badly damaged. After a lingering hæmorrhagic labour, getting up on the ninth day, she on the twenty-third day was stricken with measles, and became delirious for fourteen days. The infant subsequently took the measles very slightly. At Warley a healthy recruit died in forty hours. A staff surgeon, aged thirty-nine, contracting disease from his own children who recovered, after a few days died. At the garrison cells, Woolwich, fever has thrice visited the family of the superintendent, whose predecessor died of typhoid fever, traced to an old cesspool; yet out of 1000 prisoners annually in and out, none ever appear affected. The mysterious connexion between rheumatism, erysipelas, typhoid fever, scarlet fever, and diphtheria, and the tendency of each to induce embolism, have yet to be worked out. Last year a woman died in a cottage through puerperal fever. Two months after, although the place had been thoroughly cleansed and fumigated, one of the surviving children was affected with pemphigus. The highest mortality of scarlet fever appears to occur at the ages of two, three, four, and five; about one in seventeen cases in adults, and about one in twelve in children under fifteen years of age, fatal. Most writers agree that after death no trace is left to find the key as in treatment; for wreaking its vengeance so mysteriously, the lesions discovered are only those of the special complications, leading to the unsatisfactory results we so frequently have to deplore.

I am, Sir, your obedient servant,

December, 1871. FRANCIS R. HOGG, M.D., R.H.A.

STUDENTS' GRIEVANCES AT UNIVERSITY COLLEGE.

We cannot congratulate either the medical students of University College, London, on the consideration shown them by the Council of that College, or the latter body on their generosity towards the former. It may be remembered that during the winter session of 1870-71, several robberies of coats, umbrellas, &c., were effected from the cloak-room of University College. The Council placed the matter in the hands of the police, and the result was that a student was detected, convicted of theft, and imprisoned. It was, however, generally felt among the students that the person convicted was made a scapegoat, and that too great leniency was shown towards others who were known to be implicated in the matter. It was hoped that these disgraceful robberies would be effectually stamped out by such stringent measures. No means appear, however, to have been adopted by the College authorities to place the cloak-room under proper supervision, so as to prevent the possibility of similar depredations. Scarcely had the present session begun when coats, &c., began again to disappear in an unaccountable manner. Inquiries were instituted at the office of the College by the losers, who were told that the authorities were unwilling to go to any expense in attempting to discover the delinquent, but that they would most probably see no objection to place a man or men in the cloak-room to take charge of articles left, and to issue tickets for the same, as at other public institutions. The depredations still continuing, six coats and two umbrellas being stolen in one day, it was determined to call a meeting of the students, and to take their opinion as to what should be done to stop the nuisance. The meeting was held, and it was resolved to present a petition, praying for some secure accommodation for the students' property, and for remuneration for losses sustained. The petition was as follows:—

"*To the President and Council of University College and Hospital.*

"MY LORD AND GENTLEMEN,—It is with some reluctance that we feel bound to lay before your Lordship and the Council our claim for remuneration on account of the numerous losses many of us have recently sustained in the College. As you are already aware, during the current session several coats and other articles placed in the charge of the beadle, who had your authority for this duty, have unaccountably disappeared, without any blame or negligence being attributable to the gentlemen who have suffered. Under these circumstances, it appears to us that the College is responsible for the safe custody of our property, and that we are fairly entitled to some consideration at your hands. The loss in many instances is of a serious nature, and falls heavily on several students, who are ill able to bear the pecuniary expense involved in replacing the articles. We are led to believe that on a former similar occasion the Council was kind enough to refund the value of the missing property, and we have now urgently to request that the same course may be pursued in this instance, being convinced that you will recognise that our application is both reasonable and justifiable. We would suggest that future protection for our property might be effectually secured if a system of checks, such as is practised at all large institutions, were established.

"We have the honour to append our signatures as follows."

[Here followed the names of 113 medical students.]

The petition was presented on the 2nd December, and on the 4th the following answer was received.

Resolution adopted by the Council on December 2nd, 1871.

"That the Council, having taken into consideration the memorial of 113 medical students of University College, and heard the deputation which presented it, while regretting the circumstances referred to in that memorial, consider it to be wholly impossible to recognise any claim for compensation in respect of past losses of property such as those referred to in the memorial, or to undertake any liability in regard to the protection of articles belonging to students for the future. The Council wish it, however, to be understood that, while they shall expect the students themselves to do all in their power to look after their own property, and while they can undertake no responsibility in the matter, orders will be given to the beadle to watch carefully in order, as far as possible, to prevent depredations."

Some indignation was not unnaturally felt by the students at this complete abnegation of responsibility and want of interest evinced by the Council in their convenience. We sympathise with the medical students of University College, and hope that, deserted though they be by the authorities, they will be able to devise some efficient means of protecting their own property. Surely the Council would raise no objection to the students placing the cloak-room under the control of a man to receive and take charge of property, the necessary expenses being defrayed by the students themselves.

Mr. Robert Spence.—The use of such a title is a matter of taste. But if some accounts of it be true, it may become a matter of illegality.

VAGINAL INJECTION.

To the Editor of THE LANCET.

SIR,—Doubtless many of your readers have adopted the following simple plan; but as there may be others to whom it has never occurred, I venture to recommend it, although I shall probably be "sat upon" like Mr. Barrett, who lately in your columns reverted to the plan of injecting the male urethra with oil; for the best description of which plan, by-the-by, *vide* p. 179, second edition, Sir H. Thompson's "Stricture of the Urethra."

In self-injecting or washing out the vagina, for comfort's sake, I recommend the patient to use a modified form of bidet, made in one piece, but in two compartments; the one to contain an earthenware vessel for the reception of the lotion, and the other a deeper vessel to receive it when used. Higginson's syringe should be the one employed. The part the patient sits upon should be made narrower than usual, and can be padded &c. at will.

Yours faithfully,

Cressage, Salop, Nov. 28th, 1871. H. J. BUCK.

ARMY MEDICAL SERVICE.

WE have received communications from several correspondents relative to some of the changes that are to be effected in the above service. As we cannot within the limits of the space at our command give insertion to all these documents, we have selected one which appears to express the causes of the dissatisfaction that evidently exists. Our correspondent, writing from India, says:—

"You are probably aware of the hard and fast rule by which all the lower grades of the Army Medical Department are treated with respect to their foreign service—viz., if they happen to fall sick when abroad and have to be sent home for recovery, they either have to go on half-pay if unfit for duty at the end of six months' leave, or, if fit for duty, they have to proceed abroad again to complete the unexpired portion of the five years that they would have had to complete if they had not fallen sick. This strict rule apparently does not apply to the high rank of Inspector-General. I have it from the most direct authority that Dr. Muir is to go home after four years' service, to be relieved by Dr. Beatson, who will, therefore, enjoy for a *second term* of five years the sweets of the greatest prize our service can offer to any one of its officers—namely, a residence at Simla, with 2700 rupees per mensem to live upon. This arrangement I can only look upon as a thing that ought not to be, and such I believe will it be thought by the department generally. You are well aware how strict is the five-year rule with the Inspectors of the Indian service, who are not even eligible for service again after their tour has been completed. Surely Dr. Beatson's return for a second term cannot be contemplated in the army reorganization?"

Mr. E. E. Beatson.—There can be no doubt that a M.R.C.S. Lond. is a surgeon, and a L.S.A. an apothecary. Whether a licentiate of a College of Physicians is a physician in any special sense is more doubtful. He is certainly not what the public or the profession mean by a physician; but we do not know that he violates any law in calling himself such.

Truth, (Colchester.)—We have read the copy of the newspaper kindly forwarded by our correspondent. It is not always safe to rely on reports. We know, however, of no satisfactory or conclusive means of distinguishing between a leucorrhœal and gonorrhœal discharge.

M.R.C.S. should procure Dr. Woodman's translation of Prof. Wunderlich's work on Temperature.

B. is referred to the answer given to *Medicus* on the same subject.

ST. ANDREWS AND MEDICAL DEGREES.

To the Editor of THE LANCET.

SIR,—I cannot see the wisdom of the decision of the Scottish Universities Commissioners of 1858 to limit the number of degrees to be granted by St. Andrews to ten annually. Provided the examination be sufficiently practical and searching, there need be no limit as to number. If it be proper for ten, why not for ten hundred? The time was when the Scottish Colleges were indeed lax, and most culpably so, in the granting of their degrees, when they were justly reported to say, "Capiamus argentum et mittamus asinum in patriam suam"; but such a state of things has surely passed away. At least, as respects St. Andrews, I can really say that more than twenty years ago I read in your valuable periodical a list of the questions proposed by that University for the candidates for the doctorate, and it agreed very closely in quantity and quality with the bill of fare presented to me at my visit in 1861, and was, moreover, a very fair test of one's proficiency in general, professional, and practical knowledge. It appears to me possible that one prolific source of the ill-fame and ill-repute that that University has unjustly obtained in the public mind has arisen from certain members of our own profession, who, misguided and misdirected, have in times past travelled northwards with the idea that they had but to exchange their money for the desired parchment. Returning disappointed, however, we may well predicate what their answer would be when asked by an intelligent patient respecting the University and its degree. It would be similar, methinks, to what fell from the lips of the fox in the French fable of the "Fox and the Grapes": "Ils sont verts, dit-il, et bons seulment pour les goujats."

Again, Mr. Editor, if we value the degree ourselves, we ought not illiberally and narrowmindedly to put any obstacle in the way of our professional brethren who may wish to obtain the like distinction, actuated by the ungrounded and illogical fear, as some few are, that the greater the number of its possessors, the less valuable will it be to ourselves. Such a reflection reminds one of the clown's answer when asked whether he had ever had the measles: "No," said he; "mother had such a large family there was not enough to go round." So, let us do all in our power to open the doors as widely as possible, fully believing that our own appreciation of the degree will rise in proportion to the increase in the number of the applicants for the same honour, and certainly the more highly will it be esteemed in the eyes of the public at large.

I fully agree with you that there appears no reason why St. Andrews should have the monopoly, and why other Scottish and all other British Universities should not have the privilege and power to grant degrees to medical practitioners of a certain number of years' standing, provided always that the examination required be staunch, searching, and, withal, practical.

I am, Sir, yours, &c.,

December, 1871. H. P. D.

HANWELL ASYLUM.

WE understand that the injuries under which a patient named Luttge in the Asylum at Hanwell suffered were detected by Dr. Hawkes, whose name should have been mentioned in that connexion instead of that of Dr. Begley.

Enquirer should apply in regard to the water analysis to Mr. Wanklyn, 1 Great Winchester-street-buildings, E.C. The charge would be about a guinea and a half.

Mr. R. H. Hunter.—We are compelled to adhere to our rule. An instance of the kind referred to occurred at Plympton St. Mary, Devon, and was noticed in our issue of Dec. 2nd. Another case is mentioned in our present number, page 863.

A Sufferer had better take the advice of a medical friend as to the necessity of consulting a physician, and the proper one to select.

SEWER GASES.

A CORRESPONDENT, who has had Indian experience, suggests whether an explanation of the reason why sewer gases, if so deleterious as supposed, do not affect men employed on sewage works, may not be that foul air will exert an injurious effect upon a man sleeping, when it would do no harm to him waking; and if this be the case, he asks why? It is, he believes, a recognised fact in India and other malarious countries that to sleep in or near a jungle is more dangerous than to pass the night in the same locality awake.

Mr. J. Collings Grigg should apply to the Secretaries of such Provident Societies as that of Northampton or Leamington; or to Dr. Ford Anderson, Belsize-park, N.W.

Andrew V. Davies, (Shrewsbury.)—Mr. Chandler deserves credit for the persistence with which he kept the foreign diploma before the court. We shall be glad to receive information of the further course of the case.

Durhamite.—We do not know the price in England. Write to Messrs. Trübner, Paternoster-row.

Student (Aberdeen) should not spell efficacious "effectious."

THE TENT HOSPITAL SYSTEM.

To the Editor of THE LANCET.

SIR,—Let me entreat of you not to allow the notion to prevail that the tent hospital system is not eminently adapted both for winter use and for safe artificial heating if only the proper system be adopted. Long before huts can be put up, and infinitely better than huts when they are put up, tents can be heated in an absolutely safe manner. Most of the fearful ravages made by pyæmia, gangrene, and other allied diseases during our Crimean campaign might have been thus avoided, especially in the large military hospitals on the Bosphorus. The only safe plan of heating tents is the American one, adopted in the war of secession, and which I saw employed at the Ambulance Américaine during the cold months of the siege of Paris. No stove is allowed inside the tent, or above the level of the ground outside. The mud furnace is simplicity itself, and common, thin, light iron chimney-tubing renders the hot-air floor-trench easier of construction, as also the chimney at the other end of the tent. Such tubing is as portable as tents. Wooden huts, as proved at the Ambulance de la Presse huts at Passy, have nothing like the same immunity from contagious disease that tents have, as proved at the Ambulance Américaine. I have detailed this American tent hospital system at length in a little pamphlet (advertised in THE LANCET by Messrs. Churchill) on the medical and surgical aspects of the siege of Paris, entitled "On a New Method of Treating Wounds (Gruby's system), Tent Hospitals," &c. &c. All who run may read, and the Wakefield authorities need not have burnt an old woman and two patients (except perhaps on Sidney Smith's theory) to bring the study of heating tents safely into notice. The advantages to an army of having tent hospitals in all weathers, of being independent of dwelling houses or huts, are sufficiently obvious; but the much greater immunity from pyæmia and infectious and contagious disorders generally in tents, as compared with the best-constructed huts, is not easy to explain, except that perhaps the permeability of the cloth allows a universal dilution of infectious air by a constant in-rush of fresh atmosphere at every point of the circumference, and this in so diffused and insensible a manner that draughts are never felt. Heating the tents renders this ventilation, of course, only more effectual. Certain it is that the tent hospital system saved 50 per cent. of those operated upon at a time when 100 per cent. were being lost by a most eminent surgeon at the wooden huts of Passy.

Your obedient servant,

CAMERON J. F. S. MACDOWALL, M.R.C.S.L.,

November, 1871. Surgeon H.M.'s Bombay Army.

THE LATE DR. STEGGALL.

A CORRESPONDENT has pointed out that we omitted to mention in our memoir of the late Dr. Steggall the fact that he was for some years attached to Charing-cross Hospital, at the same period that his eldest son was house-surgeon to the same institution. Among the many students that he "ground" for the examinations may be mentioned the late Albert Smith. Dr. Steggall's *forte* as an artist was in delineating Italian peasant boys, with guinea-pigs, white mice, &c. About twenty-five years since one of such pictures was exhibited at the Royal Academy.

B. R.—It is contrary to our custom to nominate anyone. Let our correspondent consult some respectable practitioner in his own neighbourhood.

Mr. Robert De'Ath.—Obviously so in all cases of death where the circumstances do not seem to require a coroner's inquest.

Sam Slick should send us the paper in question marked at the points alluded to.

Mr. T. B. Pinckard, (Westminster General Dispensary.)—The reports have been handed over for publication, and will appear in due time.

THE "FLYING SQUADRON" UNDER ADMIRAL HORNBY.

To the Editor of THE LANCET.

SIR,—I have just been informed that a few weeks since a paragraph appeared in THE LANCET, to the effect that nothing had been heard of the medical history of the cruise of the squadron, except that complaint of want of water. The fact is that the most interesting scientific investigations—viz., the influence of climate and different kinds of food on growing lads and growing men, taking body heat, weight, chest capacity, and health as standards—were carried on by a medical officer in the flag-ship, well known for his observations on yellow fever and hospital administration. I believe they were sent in to the head of the department at Somerset House, some of the results of which were embodied in the Report furnished to Parliament by the first Naval Lord of the Admiralty, Sir Sydney Dacres, but which otherwise have not been placed before the profession.

Your obedient servant,

EDWARD H. MOORE, L.R.C.P., &c.

Cambridge Heath, Dec. 5th, 1871.

MAMMARY SECRETION IN INFANTS.

B. H. M. is right in saying that this subject is overlooked in most books. Such a secretion occurs occasionally so as to be noticed, and oftener probably when it attracts no attention. The following extract from Maunsell and Ransom's work on Diseases of Children will show that the subject has not been disregarded by all authors:—

"The breasts of infants, both male and female, contain at birth a secretion somewhat resembling milk, and which is generally supposed by the attendants to require speedy removal. Accordingly they set about pressing the part until inflammation and occasionally an abscess is produced. This notion is, however, altogether erroneous. No measure for getting rid of the secretion is necessary, and we should forbid any attempt at adopting one. We have repeatedly had to open an abscess produced by pressure employed in the way alluded to, but which, nevertheless, was always attributed by the nurse to the want of the sufficient removal of the fluid in question."

A Five Years' Subscriber.—1. Why does not our correspondent direct his attention to the Indian or British medical services, or that of the navy?—2. He might ascertain from the Colonial Office how to proceed in obtaining an appointment as colonial surgeon.—3. We believe that the post of medical officer is much sought after in the Peninsular and Oriental Company's service, or that of the West Indian Mail Packet Company. Our correspondent might apply to some respectable Medical Agency Office, or advertise for what he requires.

A. D.—We consider our correspondent's remarks display an exhibition of "bad taste" that is "graver" than anything of which he complains.

CARBOLIC ACID IN GONORRHŒA.

To the Editor of THE LANCET.

SIR,—In reply to Mr. T. Woods's letter, allow me to state that I have been using carbolic acid in combination with glycerine and tannin as an injection in gonorrhœa for the last five months, and have found it quite as efficacious as Mr. Woods describes. The following has been the formula employed:—Carbolic acid, eight grains; tannic acid, eight grains; glycerine, half an ounce; water to one ounce. It appears to act as an antiseptic, arresting the discharge, and cutting short the disease. The following are two cases out of seven treated with carbolic acid.

A. B——, aged twenty-two, sanguine temperament, presented himself with urethral discharge, and complained of much smarting and scalding during micturition. Rest, abstinence from stimulants, and light diet were enjoined. This was, however, declared out of the question, as the following week was to be one of active exercise, and a more than usual amount of exertion. Inability to avoid stimulants was also pleaded. The above injection was ordered to be used twice a day, and a mixture containing bicarbonate of potash, hyoscyamus, and decoction of broom prescribed. After the first day a spot or two were observable on the list in the morning, and the painful symptoms disappeared; on the fourth day, considering himself cured, he neither took medicine nor injected; and on the morning of the fifth found a considerable discharge and some scalding. I saw him again on the ninth day, when he considered himself quite well; but, at my suggestion, continued the medicine and injection for a short time longer.

B. C——, aged twenty, came with a gleet of some months' standing, for which he had used a variety of injections to little purpose. He was ordered to use the carbolic-acid injection twice a day. After injecting a few times the gleet entirely disappeared, but returned a fortnight afterwards after a "big drink." This, however, soon vanished on resuming treatment. He keeps an injection by him "for fear it should return."

I am, Sir, yours, &c.,

GEO. ASHMEAD, L.R.C.P. & L.R.C.S. Edin.

Brierley Hill, Dec. 12th, 1871.

Enteron.—The exact history has yet to be written, and our correspondent may distinguish himself by tracing it out. He must search the medical journals of the period. The disease was prevalent in France before the war; but it seemed to prevail in this country independently of the influx of French visitors. We do not know any single quarter from which the information contemplated in our correspondent's second question can be procured.

Mr. Wm. Sedgwick's letter shall be inserted in our next number.

"REMOVAL.—Dr. Fraser has removed to 7, North-terrace. Night bell, front door."

A practitioner in a northern town has found it necessary to insert the above notice in a daily local paper for a fortnight or more in order to explain his removal—from one side of the street to the other!

TEACHING IN THE LONDON MEDICAL SCHOOLS.

To the Editor of THE LANCET.

SIR,—By information derived from several medical students, it appears that some public supervision is imperatively demanded over the medical teaching in the medical schools in London. It is scarcely possible to believe the statements which one is obliged to hear; and were it not that the complaints came from anxious and industrious young men (first-year's students), this letter would not have been addressed to you.

To give the description of the mode of conducting the anatomical course at one of the large schools. It was commenced by one lecturer giving fourteen or more lectures on the formation of bone and the minute microscopical structure; another gentleman then took up the description of the bones, and gave the bones of the upper and lower extremities, and has now broken off abruptly, leaving the bones of the head and face, the vertebræ, and pelvis undemonstrated. The muscles are now commenced, the muscles of the back being the subject. Such an unconnected manner of teaching is certainly beyond comprehension, and can have but one result. No examinations as to the progress of the students are conducted.

Should you entertain an idea of engaging a gentleman to visit various medical schools, and report what he finds, a state of vitality would soon be apparent, and another great boon will be given to the profession and the public by the Editor of THE LANCET.

Yours obediently,

London, Dec. 5th, 1871. G. S.

NEGLECT OF VACCINATION.

DR. WHITMORE, in his Monthly Report of the Health of Marylebone, alluding to the occurrence of eight deaths in the parish from small-pox, independently of cases sent to the Small-pox Hospital, computes that not more than one-third of the children born are vaccinated within the legal period.

Monticola cannot do better than consult the Students' Number of THE LANCET. As regards his first question, it would depend upon the number of beds in the hospital. He should ask the question of the College of Surgeons. The licentiates alluded to are "surgeons."

J. M.—Dr. Tanner's Index and Dr. Hartshorne's Essentials of Practical Medicine.

THE EXPECTANT PLAN IN CHOREA.

To the Editor of THE LANCET.

SIR,—Seeing a detail of cases of chorea left to themselves, as far as medical treatment was concerned, published in THE LANCET, and that Drs. Gray and Tuckwell, of Oxford, have arrived at the conclusion that the duration of this disease is the same whether medicines be used or not, I beg to say there is ample evidence to show that treatment is of direct use in shortening the duration of the attack. I have not had time to make searches into this point; but I can from memory refer those gentlemen to a paper published not many years since by Dr. Fuller, and to be found in the "Transactions of the Royal Medico-Chirurgical Society of London." It was belladonna which this gentleman used.

I am, Sir, yours, &c.,

Dublin, December, 1871. HENRY KENNEDY.

VENTILATION OF SCHOOLS.

WE regret that we have been compelled to defer the consideration of this subject.

Dubius.—We are unable to say what "medical monthly magazines pay for accepted articles."

Mr. John Stenhouse's pamphlet "On the Ventilation of Sewers" has been received, and shall be noticed.

Dr. Balbirnie (Sheffield) is quite right to disbelieve the statement to which he alludes.

Enquirer, (Leicester.)—We think it would be advisable that the resident medical officer should be a duly qualified man.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Playfair; Lord Londesborough; Mr. O'Connell; Dr. Fergus, Marlborough College; Mr. Straker; Dr. Howe, Hullerhurst; Mr. Paul, Douglas; Mr. Cooke, Eltham; Mr. Crawford, Chepstow; Dr. Kelly; Mr. Munroe, Stirling; Mr. Bedford; Mr. Lee, Canterbury; Dr. Balbirnie, Sheffield; Mr. Lawson, Egremont; Mr. Martin, Evesham; Mr. Callaghan; Mr. Smith, Oldham; Messrs. Verity and Co.; Mr. Lonsdale, Madrid; Mr. Robinson; Mr. Digby; Mr. Shaw; Mr. Montgomery; Dr. Murray Lindsay; Dr. Provis, Croydon; Dr. Ironside; Mr. Hepworth, Tewkesbury; Mr. Ryland; Dr. Jeaffreson, Newcastle; Mr. Waters, Ombersley; Mr. Davis, Hexham; Dr. Ashmead, Brierley Hill; Dr. Day, Stafford; Dr. Gillies, Esdale; Mr. Green, Glasgow; Mr. Hall; Dr. Syson, Salford; Dr. Ebersgorff, St. Petersburg; Mr. Levy; Dr. Cameron, Fort William; Mr. Miller, Northampton; Mr. Brotherton, Alloa; Dr. Fox, Scarborough; Mr. Osbaldeston; Dr. Campbell, Cambridge; Dr. Stafford; Dr. Williams; Mr. Robertson, Glasgow; Dr. Cadell; Mr. Beatty; Dr. Sedgwick; Mr. Baker; Mr. Lane, Stanford; Mr. Parsons; Dr. Hennerbennett; Mr. Fowler, Eltham; Dr. Sharpe; Mr. Ward, Louth; Mr. Prideaux, Sheffield; Mr. Worthen, Belfast; Mr. Norton; Mr. Johnson, Hull; Mr. Jones, Colyton; Mr. Dent, Beaconsfield; Dr. Marcet, Nice; Mr. Roberts; Mr. Hyman, Liverpool; Mr. J. Armfield; Mr. B. Thompson; Dr. Woodcock, Manchester; Mr. Farrow; Mr. W. Archer; Mr. Bridges; Mr. Eaton, Uppingham; Dr. Brues, Berkwall; Dr. Hawkes, Hanwell; Dr. Griffiths, Dublin; Mr. Dewe; Mr. Orpin; Mr. Sedgwick; Mr. Busby; Mr. Macdowall; Dr. Stenhouse; Dr. Pinchard; Mr. Fowler; Dr. Wright, Kalmandoo; Mr. Walker; Mr. Chandler; Mr. Fraser, Dublin; Mr. Emmis, Littleport; Mr. Rushton; Mr. Amesbury, Derby; Mr. Wilson, Newcastle; Mr. Hawkins, Bury St. Edmunds; Mr. Hearn, Shirley; Mr. Adamson; Dr. Barton; Mr. Jacobs, Leytonstone; Mr. Grant, Frome; Mr. J. Baynes, Shepton Mallet; Mr. Shepperton, Spalding; Dr. Sampson, Abbotsfield; Dr. Veale, Ripley; Mr. Thorpe; Dr. Kennedy, Dublin; Mr. Curry, Liverpool; Mr. Dawson, Brentford; Mr. Ede; Mr. Foxley; Mr. K. Williams; Dr. Ball, Spalding; H. P. D.; J. M.; Enquirer; Medicus; Monticola; B.; Dubius; Alpha; An Aberdeen Student; B. W. S.; Asplenium; Ixion; The Editor of the *Manchester Courier*; G. H.; A. K.; R. H. H.; A. B.; A Five Years' Subscriber; B. S.; A General Practitioner; M.R.C.S.; B. S.; J. E. L.; B. S., Glasgow; A Sufferer; &c. &c.

New York Daily Tribune, Salopian, Kidderminster Shuttle, Carlisle Express, Liverpool Albion, Northampton Herald, Mouvement Médicale, Macclesfield Courier, Walthamstow Chronicle, and *North British Daily Mail* have been received.

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